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Prospects for the internal gas and electricity market

Implementation report

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Note: this report covers 25 of the 27 Member States. The situation in Bulgaria and Romania was reviewed by the Secretariat of the Energy Community, in the framework of its task to facilitate the development of Road Maps for the Parties of the Treaty as requested by the Ministerial Council and by the Permanent High Level Group of the Energy Community. These reports, released in June 2006, detail the state of play of the implementation of the appropriate acquis with respect, among others, to electricity and gas.

Belgium

1.PRINCIPAUX PROBLEMES

Accès des tiers au réseau

La situation dans le **secteur électrique** se normalise progressivement et dans le cadre des accords passés avec le gouvernement en 2005, ELECTRABEL devrait perdre sa minorité de blocage au sein d'ELIA ce qui renforcera son indépendance.

Dans le secteur gazier, la situation n'est pas satisfaisante à un double titre. En premier lieu FLUXYS est le gestionnaire de réseau désigné mais pour une période provisoire (procédure d'infraction en cours) et la gestion des contrats de transit par DISTRIGAZ pose la question de la possible qualification de cette compagnie comme gestionnaire de fait non désigné passible d'un procédure d'infraction.

Les solutions proposées par l'entreprise dans le cadre de la fusion de Gaz de France et de Suez pourraient remédier partiellement à ces manquements.

Pouvoirs et indépendance des autorités de régulation fédérale

Des compétences élargies ont été données au régulateur fédéral, la CREG, par la loi du 29 avril 1999et l'indépendance de la CREG est reconnue

Les dispositions des lois de transposition du 1 juin 2005 combinée avec les dispositions de la loi du 27juillet 2005 (voies de recours) et celle du 20 juillet 2006 amènent à se questionner sur l'évolution de la situation de la CREG.

Transparence du marché

La création de la bourse d'électricité BELPEX ne peut que faciliter les conditions d'une transparence accrue en créant une plate-forme pour le commerce d'électricités.

La transparence des conditions du marché d'équilibrage est à améliorer et le contrôle des coûts en la matière par le régulateur doit être renforcé.

Dans le secteur du gaz, la dominance de DISTRIGAZ combinée à une transposition incomplète de la directive 2003/55/CE empêche le fonctionnent effectif du marché intérieur

Coordination des gestionnaires de réseau

Elle est clairement établie dans le cadre de l'accord de 2005 établi entre les régulateurs mais il reste encore des progrès à effectuer dans le cadre de cette coopération volontaire.

Obligations de service public

Les OSP relatives à la distribution relèvent du niveau régional ce qui crée, dans la pratique, des discriminations entre les clients éligible selon qu'ils résident en Flandres ou dans les deux autres régions.

Ce point est particulièrement critique dans la perspective de l'ouverture des marchés en 2007 aux clients domestiques car l'imposition d'OSP trop exigeantes et non proportionnées à

l'objectif de l'intérêt général peut décourager les nouveaux entrants de fournir. Cette question fera l'objet d'une lettre pré-226.

2. VUE D'ENSEMBLE DU CADRE REGLEMENTAIRE

La Belgique a transposé les secondes directives électricité et gaz par les lois du 1 juin 2005 modifiées par la loi du 20 juillet 2006 non encore notifiée.

L'ouverture des marchés est effectuée selon un calendrier différencié selon les régions et les clients éligibles.

L'ouverture complète à la clientèle domestique interviendra le 1 janvier 2007 en région wallonne et à Bruxelles capitale.

Il existe quatre régulateurs, un pour le fédéral et trois pour le régional.

La CREG (Commissions de Régulation de l'électricité et du gaz) au niveau fédéral est établie et fonctionne depuis plusieurs années. La récente loi du 20 juillet 2006 en modifie la composition et l'examen de compatibilité au regard des directives n'a pas encore été effectuée.

La VRAG (Commission de régulation régionale flamande) fonctionne activement, l'ouverture du marché flamand ayant été effectuée au 1 juillet 2003, la CWAPE (Commission régionale wallonne) achève son installation opérationnelle et en Région Bruxelles capitale, le régulateur (IGBE) connaît un certain retard qui devrait être comblé en 2007 au moment de l'ouverture complète des marchés.

En ce qui concerne les gestionnaires de réseau de transport, la Belgique a effectué la séparation juridique pour le secteur électrique mais dans le secteur du gaz la situation actuelle fait l'objet d'une procédure d'infraction.

Dans le secteur de la distribution, EANDIS CREATION et INFRAX crées en 2006 seront responsables de l'exécution des tâches de gestionnaires de réseau de distribution.

Des procédures d'infraction ont été ouvertes par décision de la Commission Européenne du 4 avril 2006 à la fois pour le secteur électrique et le secteur gazier et les réponses des autorités nationales sont en cours d'examen.

3. DESCRIPTION DU MARCHE

La situation du marché belge de l'énergie va évoluer suite à la décision de la Commission de donner son accord sous conditions à la fusion Gaz de France avec le groupe Suez .Le recours des syndicats français en repoussera cependant la mise en ouvre.

La description qui suit reflète donc et uniquement la situation actuelle.

On peut considérer que le marché fonctionne peu en Belgique compte tenu de la position dominante des deux opérateurs historiques à la fois dans l'électricité et le gaz bien que diverses actions importantes aient été prises par le gouvernement fédéral depuis plus de 6 ans.

Le secteur gazier n'a pas fait l'objet de la même approche volontariste.

ELECTRICITE

L'émergence d'un marché régional

Il existe une coopération importante entre les trois pays, notamment au niveau des régulateurs et des gestionnaires de réseau de transport, en vue de la création du marché régional entre la France, la Belgique et les Pays Bas formalisée par l'accord de septembre 2005 entre les régulateurs belge (CREG), français (CRE) et néerlandais (Dte) qui vise à parvenir à l'intégration régionale de leurs marchés électriques de gros respectifs. Cette intégration vise à améliorer la liquidité, la sécurité d'approvisionnement et la stabilité des prix sur ces trois marchés, à accroître la disponibilité de la capacité transfrontalière entre les trois pays et d'en améliorer l'utilisation au profit des consommateurs belges, français et néerlandais.

Ce processus fragile dépend pour sa réussite de la continuité des engagements des trois pays vers l'achèvement du marché intérieur. Le projet de loi de privatisation en cours en France pourrait saper les fondements de ce processus et ce au-delà des seules questions de compatibilité avec les directives.

La création de BELPEX

Belpex, la société qui doit organiser la bourse d'électricité, a été juridiquement créée le 7 juillet 2005 par Elia (GRT), les bourses énergétiques française et néerlandaise, à savoir Powernext et APX, et par TenneT.

Ce couplage de marché a pour avantages une plus grande liquidité du marché, une meilleure allocation des moyens, une utilisation croissante de la capacité journalière aux interconnexions aux frontières et une meilleure gestion de la congestion.

Description du marché

L'énergie électrique demandée, c'est-à-dire la consommation nette plus les pertes de réseau, a atteint 87.075 GWh en 2005, soit une baisse de 0,6 % par rapport à 2004. Malgré cette légère baisse, la puissance de pointe demandée a légèrement augmenté en 2005. L'industrie représente près de la moitié de la consommation électrique totale en Belgique. La consommation domestique et la consommation par les commerces et les services publics représentent de leur côté plus d'un cinquième de la consommation électrique totale. Le tableau 6 donne un aperçu de l'évolution de l'énergie et de la puissance de pointe demandées au cours des cinq dernières années.

La capacité de production installée totale s'élevait à 15.680 MW en 2005.

Marché de la production en 2005

L'énergie électrique produite en 2005 par les centrales exploitées en Belgique par Electrabel et par sa concurrente SPE correspond à 80.568,7 GWh.

L'évolution qu'a connue le marché belge de la production d'électricité en 2005 était caractérisée par les faits marquants suivants:

L'augmentation de la capacité de production disponible,

l'entrée des opérateurs étrangers GDF et Centrica dans le capital social de SPE, le deuxième plus grand producteur d'électricité de Belgique, à hauteur de 51%;

le lancement de l'offre d'achat et d'échange du groupe français Suez sur l'ensemble des titres de sa filiale belge, Electrabel, qui n'étaient pas encore en sa possession. Au terme de cette opération, qui a pris fin le 6 décembre 2005, Suez possédait pratiquement 99 % d'Electrabel;

l'accord conclu entre le Gouvernement fédéral et Suez à la suite de l'offre d'achat et d'échange de Suez sur Electrabel (connu sous le nom de « *Pax electrica* »). En ce qui concerne la production d'électricité, il aurait été convenu qu'Electrabel mette en vente les sites non utilisés sur lesquels 1.500 MW de nouvelle capacité de production pourrait être cumulée. Si un nombre insuffisant de sites sont vendus, un prélèvement serait alors perçu sur les sites inutilisés. Par ailleurs, cet accord en matière de production et de marché de gros de l'électricité obligerait Electrabel à mettre en vente 500 MW sur la bourse belge d'électricité en construction, Belpex. L'entrée en vigueur de cette mesure est prévue pour 2006.

GAZ

Les deux directives relatives au secteur du gaz naturel ont été transposées au niveau fédéral et régional. L'autorité fédérale a transposé les deux Directives gaz par le biais de la modification de la Loi du 12 avril 1965 relative au transport de produits gazeux et autres par canalisations. Les autorités régionales ont effectué la transposition par l'intermédiaire des réglementations suivantes : Décret du 6 juillet 2001 relatif à l'organisation du marché du gaz (pour la Région flamande), Décret du 19 décembre 2002 relatif à l'organisation du marché régional du gaz (pour la Région wallonne), Ordonnance du 1er avril 2004 relative à l'organisation du marché du gaz (pour la Région de Bruxelles-Capitale).

Les clients finals raccordés au réseau de transport de gaz naturel sont éligibles depuis le 1er juillet 2004. En Région Flamande, le marché est totalement ouvert depuis le 1er juillet 2003. En Région wallonne, les clients finals dont la consommation annuelle est supérieure à 0,12 GWh de gaz par an et par site, de même que tout client professionnel qui en fait la demande sont éligibles depuis le 1er juillet 2004. En Région de Bruxelles-Capitale, les clients professionnels sont éligibles depuis le 1er juillet 2004. Les clients résidentiels deviendront éligibles entre le 1er janvier en Wallonie et au plus tard le 1er juillet 2007 à Bruxelles. A ce jour, près de 90% du marché belge du gaz naturel est ouvert.

3. PROBLEMES

ELECTRICITE

Fonctionnement du marché de gros

Les opérateurs doivent se fournir auprès de l'opérateur historique pour la plus grande partie de leur volume et importent le reste.

La situation des prix élevés sur le marché de gros affecte les possibilités d'entrer sur le marché compte tenu de l'avantage de prix qui résulte de la détention du parc nucléaire ; la question des contrats de fourniture à long terme a été soulevée par les clients éligibles gros consommateurs d'énergie mais à ce stade aucune inflexion de la politique gouvernementale n'est observée.

L'absence de liquidités est unanimement déplorée par les grands consommateurs.

Les mesures prises dans le cadre de la « pax electrica « devraient améliorer cette situation. L'exécution de ces mesures a été fixée en 2006 et il est encore prématuré de dire quels en seront les impacts sur le fonctionnement du marché de gros.

Les enchères implicites sont satisfaisantes mais possibles uniquement en day ahead.

Aucun mécanisme de régulation des offres n'existe sur le marché de gros.

Nouveaux entrants et nouveaux investissements

Les nouveaux entrants tels Centrica et Gaz de France sont propriétaires pour partie de la société SPE et ont acquis en 2005 51 % de cette société. NUON (société néerlandaise) peut compléter son apprivoisement en faisant appel à ces unités de production aux pays bas). RWE et ELECTRABEL ont mis en service une nouvelle centrale TGV dotée d'une capacité de 38O MW.

Dans le cadre de la «pax electrica» conclue en 2005 entre le gouvernement et l'opérateur historique, les autorités nationales ont imposé à l'opérateur historique différentes mesures pro-concurrentielles, notamment la cession de sites pour la constitution de nouvelles capacités de production cumulée de 1500 MW.

Les derniers accords intervenus en 2006 en matière d'accès au nucléaire devraient favoriser la concurrence.

Des incitations fiscales importantes existent en faveur des énergies renouvelables, notamment en région flamande. L'arrivée de nouveaux entrants sur ce segment de marché est facilitée.

Transparence

Cette question est assez peu développée en Belgique car il n'existe pas de bourse de l'électricité.

La situation devrait s'améliorer suite à la création de BELPEX en juillet 2005 qui offrira une plate-forme pour la négociation de l'électricité sur une base day-ahead et des produits VPP seront aussi proposés cependant la position dominante d''Electrabel constitue un défi pour l'émergence de cet outil.

La question de la régulation des tarifs de transport et de distribution

La loi du 1 juin 2005 annonce une profonde réforme de la régulation des tarifs de réseau. Les dispositions en question ne sont toujours pas entrées en vigueur.

Le mouvement de baisse des tarifs de transport et de distribution qui ont baissé en moyenne entre 9 et 5% pour les clients privés et les clients industriels risquerait d'être affectées par la modification des compétences du régulateur fédéral qui a perdu son pouvoir d'approbation des tarifs par la loi du 1 juin 2005.

L'année 2006 pourrait être une année test de l'impact de la nouvelle disposition législative sur le prix d'accès des tiers au réseau et d'un risque de renchérissement de cet accès qui se répercutera sur le client final.

5. Gestion de l'allocation des capacités aux frontières

Suite à l'arrêt de la Cour de Justice des Communautés Européennes du 7 juin 2005 dans l'affaire C-17/03, les capacités prioritaires accordées aux contrats historiques ont été libérées. La capacité ainsi libérée de la France vers la Belgique a été transférée vers l'allocation de capacité mensuelle. En ce qui concerne la frontière belgo-néerlandaise, la capacité libérée a été transférée vers l'allocation de capacité journalière.

La capacité journalière est utilisée pour le " trilateral market coupling".

Cependant l'impact sur les prix est encore difficile à mesurer car, après une baisse des prix à la frontière sud, les prix des enchères ont à nouveau considérablement augmenté.

Les obligations de service public et le marché de détail

De compétence régionale, les régimes en place ou en cours de finalisation différent selon les régions, Les OSP sont perçues par certains nouveaux entrants comme une entrave à la concurrence notamment en région wallonne et en Région Bruxelles capitale.

En Wallonie, les OSP sont très contraignantes et il en est de même à Bruxelles où le fournisseur doit s'engager dans une relation contractuelle de 3 ans avec son nouveau client et ne peut rompre le contrat même en cas de défaillance de paiement de la part du client.

Ces obligations sont examinées par la Commission qui est en charge d'évaluer si elles respectent les critères de transparence, de non discrimination et de proportionnalité par rapport aux objectifs recherchés établis par l'article 3 de la directive et l'article 86 du traité CE.

Changement de fournisseur

Il est encore trop tôt pour évaluer l'effectivité de l'ouverture du marché sur l'ensemble du territoire cependant des résultats positifs apparaissent dans certaines régions.

- En région flamande

En 2005, 4,58%(sur la base du volume) des consommateurs finals ont signé un contrat avec un autre fournisseur. Le taux de changement de fournisseur a ainsi atteint 15,15 % au total depuis la libéralisation du marché.

Cependant et compte tenu du très haut niveau de concentration à la fois sur la marché belge mais aussi sur les marchés voisins, trois fournisseurs ont une part de marché supérieure à 5% et ensemble ces trois entreprises ont une part de marché de 95,09 % dans le volume livré total

- En région wallonne

Quatre acteurs détenaient une part de plus de 5 % du marché libéralisé. Ils possédaient ensemble 62,2 % du marché. Cependant, cela représentait près de 97 % du marché libéralisé.

La part des entreprises exclusivement étrangères était minime.

Bien qu'aucune nouvelle étape d'éligibilité ne soit intervenue sur le marché de l'électricité au cours de l'année 2005, l'exercice a cependant été marqué par une augmentation importante (x

2) du nombre de clients éligibles. Il s'agit essentiellement de clients résidentiels de la distribution à basse tension ayant choisi un fournisseur vert.

- Région de Bruxelles-Capitale

En Région de Bruxelles-Capitale, une seule entreprise possède une part de marché de fourniture d'électricité supérieure à 5%.

En 2005, la Région de Bruxelles-Capitale dénombrait 7 fournisseurs d'électricité n'entretenant aucune relation avec le GRT ou le GRD.

Fonctionnement des gestionnaires de réseau

Elia, gestionnaire de réseau de transport d'électricité, juridiquement séparée d'Elactrabel, fonctionne de façon indépendante et la minorité de blocage d'Electrabel doit passer de plus de 27% à 24.3% en 2006 .

Certains clients éligibles ont exprimé le sentiment que le gestionnaire de réseau a un intérêt fort à maintenir la congestion aux interconnexions car il peut retirer beaucoup de revenus des enchères. ELIA est cependant en mesure d'indiquer les capacités d'importation qui seront disponibles en 2007 dès à présent ce qui aura une influence sur les capacités de fournir pour les nouveaux entrants.

En ce qui concerne les **gestionnaires de réseau de distribution** , les difficultés rencontrées par les autres forunisseurs que le fournisseur historique pour fournir les clients éligibles autres que ceux raccordés directement au réseau de transport devraient s'amenuiser avec la création de l'opérateur unique (EANDIS en Flandres et INFRAX en Wallonie).Suite à la mise en place de cet opérateur, Electrabel devra se retirer formellement de ses activités d'exploitation techniques du réseau de distribution.

GAZ .

1. particularités du système belge

1.1 importation

La Belgique importe la totalité de sa consommation de gaz naturel, soit par gazoduc, soit sous forme de GNL. L'approvisionnement de la Belgique en gaz naturel est principalement assuré par les Pays-Bas (38%), la Norvège (40%), l'Algérie (15%) et le marché spot de Zeebrugge (7%). Le rôle de plaque tournante de la Belgique dans l'approvisionnement gazier ouest-européen, grâce à Zeebrugge et au réseau de transit sur le territoire belge se confirme chaque année : la capacité de transit réservée à long terme est de l'ordre de 48 milliards de m^3/an.

La consommation de gaz naturel a légèrement augmenté en 2005 (+1,4%), passant de 187.330 GWh en 2004 à 189.853 GWh en 2005. Cette augmentation est principalement due à celle de la consommation aux fins de production d'électricité qui a augmenté de 5,6%. Les projections de la CREG tablent sur une croissance annuelle moyenne de 2,92 %.

1.2 Les deux types de gaz

Il doit être précisé qu'en Belgique, deux types de gaz sont fournis, à savoir le gaz L à bas pouvoir calorifique (9,769 kWh/Nm³) et le gaz H à haut pouvoir calorifique (11,630 kWh/Nm³).

Le marché belge est caractérisé par la coexistence de deux réseaux : un réseau de gaz H (pouvoir calorifique nominal 11,63 kWh/m³(n)) et un réseau de gaz L (pouvoir calorifique nominal 9,769 kWh/m³(n)). Ces deux réseaux sont interconnectés par le biais de deux transformateurs, à Lillo et Loenhout. Le réseau L est alimenté depuis les Pays-Bas (points d'entrée de Zandvliet et de Poppel) et la zone d'irrigation du gaz L est traversé par une double conduite de transit, les « dorsales », qui relient les Pays-Bas à la France. Il n'est techniquement pas possible de transporter du gaz L sur le réseau de gaz H, et vice versa. Il est cependant possible de convertir du gaz H en gaz L en vue de son injection dans le réseau de transport de gaz L. Fluxys dispose de deux installations de conversion du gaz H en gaz L.

Le réseau de gaz H s'étend sur l'ensemble du pays, à l'exception de la région de Bruxelles-Capitale. Le réseau de gaz L quant à lui se concentre à Bruxelles ainsi que dans les provinces d'Anvers, du Limbourg, du Brabant flamand, du Brabant wallon et du Hainaut. Il n'existe aucun réseau de transport de gaz L dans les provinces belges de Flandre occidentale, de Flandre orientale et du Luxembourg.

Le réseau de gaz H est alimenté depuis le Royaume-Uni, les Pays-Bas, l'Allemagne, la France et le Terminal LNG de Zeebrugge, et possède également deux connexions avec le Luxembourg (points de sortie du réseau Belge uniquement). Les axes de transit de gaz H sont SEGEO ('s Gravenvoeren-Blaregnies, conduite mixte transport/transit), Troll (Zeebrugge-Blaregnies/Quévy, conduite réservée au transit), vTn/rTr (Eynatten/Zeebrugge/Zelzate, conduite mixte transport/transit). Deux sites de stockage de gaz naturel sont connectés au réseau de gaz H : le stockage de LNG de Dudzele et le stockage en nappe aquifère de Loenhout.

L'accès au gaz L est limité et seul DISTRIGAZ peut se fournir auprès de GASUNIE(NL).

Cette exclusivité perturbe le fonctionnement du marché dans une partie de la Belgique qui est seulement approvisionnée par ce type de gaz et les concurrents potentiels de DISTRIGAZ dépendent complètement de celle-ci pour voir fournir en concluant un contrat back to back.

Cette question constitue un frein à de nouveaux investissements, car GasUnie Trade and Supply (GUTS) refuse de vendre le gaz L aux concurrents de DISTRIGAZ.

Par ailleurs et si les produits de base sont généralement disponibles, il existe peu de flexibilité pour les concurrents de DISTRIGAZ et de GAZ de France qui, au travers de ses capacités de stockage qui sont lui assignées dans le cadre des obligations de servie public pour la sécurité d'approvisionnement Pour DISTRIGAZ, les capacités de transit peuvent être utilisées pour fournir le marché belge au travers de DISTRAGAZ & CO.

Cette question de dominance a été traitée par les remèdes proposés à la Commission européenne dans le cadre de l'opération de fusion entre SUEZ et Gaz de France.

Le transporteur

Les activités de transport domestique (acheminement) et de stockage de stockage de Fluxys sont régulées tant en ce qui concerne l'accès des tiers (TPA) et des tarifs. Elles sont soumises à la loi et au code de bonne conduite. En revanche, le Conseil d'Etat a ordonné la suspension de l'exécution du code de bonne conduite dans la mesure où il s'applique aux activités de transit. Le code de bonne conduite suspendu en ce qui concerne son application au transit n'a été remplacé par aucun autre arrêté d'exécution de la loi gaz. En conséquence, aucun document relatif à l'accès des tiers aux capacités de transit n'a été sous soumis pour approbation à la CREG. Depuis le 1er juillet 2006 seulement s'applique le Règlement 2005/1775/CE aux activités de transit. Toutefois, ce règlement ne comble pas entièrement les lacunes dans l'application des règles de TPA au transit créées par l'arrêt du Conseil d'Etat.

Le marché de gros

En 2005, le volume sur le marché national du gaz naturel s'élevait à 189,8 TWh ou 17,1 bcm, soit une hausse de 1,4 % par rapport à 2004. 100 % sont importés. Les principales sources étaient, en 2005 (par ordre décroissant) : les Pays-Bas, la Norvège et l'Algérie. L'approvisionnement en gaz naturel en Belgique est bien réparti entre différentes zones d'entrée, même si Zeebrugge occupe une place importante. 59 % de l'approvisionnement est garanti au moyen de contrats à long terme avec un producteur étranger et 15 % par le biais de contrats à court terme avec un producteur étranger. En 2005, le gaz à faible pouvoir calorifique, provenant exclusivement des Pays-Bas, représentait 29,2 % de la quantité de GWh de gaz naturel consommée en Belgique.

Au cours de l'année 2005, approximativement 1.269 GWh en moyenne (109 millions de m³) ont été négociés par jour sur le hub de Zeebrugge. Un quart seulement de ces transactions s'est traduit par un échange physique de gaz. En 2005, une nouvelle catégorie de produits a été négociée sur le hub de Zeebrugge, en plus des produits '*day-ahead*' (avec livraison le lendemain), à savoir le commerce '*within day*'. Le nombre de transactions enregistrées dans cette catégorie est encore très limité.(Source : CREG)

D'après la CREG, la comparaison des index de prix pertinents montre que les prix « long terme » en Belgique suivent de très près les prix « frontière » en Allemagne. Par contre, les prix sur le Hub de Zeebrugge suivent de plus près les prix sur le NBP au Royaume-Uni, qui ont été nettement plus élevés fin 2005.

Un niveau très élevé de concentration

D'après les calculs de la CREG, respectivement 84 % des volumes de gaz H et 88 % des volumes de gaz L vendus par les importateurs aux fins de la consommation en Belgique ont été vendus par Distrigaz et Electrabel (ECS). GDF a vendu, en 2005, respectivement 10 % des volumes de gaz H et 12 % des volumes de gaz L vendus par les importateurs aux fins de la consommation en Belgique.

Un niveau de congestion contractuelle important pour les capacités d'importation dû à un volume de transit

Plus de 56% des quantités transportées sur le réseau belge proviennent du transit international et sont destinées à l'étranger.

Ce diagnostic de congestion contractuelle posé par la CREG est confirmé par la notification de certains refus de capacité par Fluxys. Face à cette situation, la CREG a pris trois types de

mesures. Premièrement, la CREG a veillé au développement d'un cadre régulatoire et contractuel favorisant le développement du marché secondaire. En effet, les données sur les flux de 2005 montrent que, sur différents points d'accès du réseau de transport, certains *shippers* n'utilisent qu'en de très rares occasions la capacité qu'ils y ont réservée. Un marché secondaire efficace devrait les amener à revendre cette capacité inutilisée pendant la plus grande partie de l'année. Deuxièmement, la CREG a demandé au gestionnaire de réseau de revoir ses règles d'allocation de capacité, pour que le peu de capacité encore disponible ne puisse être réservé à la première demande de capacité en vertu d'une règle «first committed first served ». Troisièmement, la CREG suit de près la réalisation du plan d'infrastructure établi par le gestionnaire de réseau et les investissements devant contribuer à la création de nouvelle capacité. En effet, l'année 2005 a été caractérisée par des mois d'hiver relativement doux. Dans sa proposition de plan indicatif pour l'approvisionnement en gaz naturel[1] 2004-2014, la CREG a réalisé une évaluation de la congestion physique sur le réseau dans le cas d'un hiver rigoureux (critère 1/20 pour le débit pic). Le résultat de cette évaluation a mené la CREG à conclure que le réseau est virtuellement saturé et qu'une pénurie pourrait être constatée en cas d'hiver rigoureux.

Évolution des tarifs de transport

Une tendance à la baisse qui a atteint environ 10% du total par rapport à l'exercice 2002.

Là encore il conviendra de mesurer les impacts des dispositions de la loi du 1 juin 2005 combinée à la loi du 20 juillet 2006 en ce que le nouveau dispositif pourrait amener à un contrôle moins strict des coûts proposés par le gestionnaire de réseau.

L'indépendance du gestionnaire de réseau de transport

Bien que l'article 8 de la loi le spécifie, Fluxys a été désignée gestionnaire de réseau de façon provisoire ce qui n'est pas conforme avec la directive 2003/55. La Commission européenne a ouvert une procédure d'infraction pour non désignation des gestionnaires de réseaux.

La désignation des gestionnaires de réseaux de transport, de stockage et de GNL à titre définitif doit encore avoir lieu et implique le respect d'obligations complémentaires en matière d'indépendance des gestionnaires par rapport à leurs actionnaires.

La situation particulière du transit de gaz

En 2005, 39,3 bcm de gaz ont été transportés sur le réseau de transport belge. Un peu plus de 56 % de cette quantité, à savoir 22,2 bcm, provenaient du transit international et étaient donc destinés à l'étranger. Seuls 17,1 bcm étaient destinés à la consommation et au stockage en Belgique.

Les capacités disponibles sur tous les points frontaliers sont publiées sur le site Internet de Fluxys, l'entreprise de transport de gaz naturel.

Cependant la gestion de ces capacités perturbe le fonctionnement du marché en ce que DISTRIGAZ &CO peut intervenir sur le marché de fourniture compte tenu de l'insuffisance d'indépendance entre les fonctions de transporteur et de fournisseur.

...

Les capacités de transit sont gérées par DISTRIGAZ et contractuellement réservées dans des contrats long-terme

La CREG a lancé des procédures d'investigation sur ce type de contrats et a finalisé son étude qu'elle a adressée au ministre. La CREG jugerait que les contrats historiques de transit échappent à toute régulation. Pour les contrats signés après la libéralisation, la CREG estimerait que les nouvelles règles d'accès au réseau, y compris les tarifs de transit régulés, sont d'application. Elle compte approuver des tarifs et d'autres règles d'accès relatives au transit, et a indiqué que les contrats non protégés devraient être modifiés.

CONCLUSIONS

La situation du marché belge de l'énergie est caractérisée par la dominance des opérateurs historiques.

Dans le secteur de l'électricité, des progrès importants ont été effectués et la mise en oeuvre effective et complète des accords entre le gouvernement et l'entreprise dominante devraient apporter de nouvelles améliorations au fonctionnement du marché.

La situation du gaz reste préoccupante mais la situation actuelle de dominance du marché sera modifiée suite à la fusion GDF-SUEZ et à la mise en place des remèdes qui ont été négociés par la Commission européenne avec les parties .

Czech Republic

Main issues

- **Market opening and competition:** on 1 January 2006 the Czech electricity market was fully liberalised; for gas, only households are not yet able to select its supplier. Legal unbundling has been carried out, although the Law only sets 1 January 2007 as the deadline to do so. There is no functioning wholesale electricity market. For gas, only five eligible customers have switched gas suppliers so far.

- **Regulatory authorities:** the Czech regulator seems to have sufficient powers, ensuring a stable regulatory framework. However, its financial and human resources are too limited. Doubts arose regarding its independence following the government' decision to revoke the previous chairman without notice. The regulator has no competence for cross-border issues.

- **Unbundling:** The State-owned TSO, which has its own assets, is not related to the DSOs. DSOs with no more than 90,000 customers have not been subject to ownership unbundling.

- **Transparency of the market:** the Czech regulator is committed to developing a transparent auction mechanism in electricity for the whole central and eastern European region, whereby transmission capacities will be sold together with energy. Generally there is scope for improvement on transparency, particularly with respect to cross-border transportation services for gas.

- **EU integration**: electricity interconnection capacities are insufficient. The TSO's extension projects have not been accepted by Germany and Austria. Different conditions persist for gas transit and transportation.

- **Public service obligations:** households can turn to the last resort supplier. The regulator designated existing DSOs as last resort supplier at a regulated price. In gas, there is a maximum price for eligible customers until April 2007.

OVERVIEW ON REGULATORY FRAMEWORK

Transposition

La transposition a été effectuée par l'acte 670/2004 du 14 Décembre 2004, qui amende l'acte 458/2000, dénommé l'Energy Act', qui avait transposé la première directive. Cet acte amende également les Lois 151/2002 Coll., Act No 262/2002 Coll., Act No 309/2002 Coll., Act No 278/2003 Coll. and Act No 356/2003 Coll.

L'ouverture du marché a eu lieu en janvier 2005 pour les clients non domestiques (78%) et tous les clients sont éligibles depuis le 1 janvier 2006. Les courbes de 'load profile', très utiles pour la consommation en basse tension (PME) sont établies. CEPS, gestionnaire de réseau de transport d'électricité, est déjà une société distincte et la séparation de propriété a été entièrement effectué en septembre 2004 (vente des 33% encore détenus par CEZ). Il n'y a plus d'administrateur de CEZ (producteur) au Conseil d'administration de CEPS.

La loi contient toutes les dispositions relatives à la séparation fonctionnelle et légale qui sont exigeantes.

Pour la distribution, la séparation comptable a été effectuée au 1/1/2005, pour tous les distributeurs, pour de nombreuses activités (fournisseur de dernier recours, consommateurs protégés, utilisation des actifs d'une société-sœur…)

La séparation fonctionnelle et légale est imposée au 1/1/2007 aux distributeurs de plus de 90000 consommateurs (8 entreprises) et pour cela a fait l'objet d'une procédure d'infraction. En effet la loi prévoit qu'une entreprise peut demander une dérogation à la Commission Européenne pour ce qui concerne la mise en ouvre de la séparation fonctionnelle et légale ce qui est clairement une mauvaise transposition de la directive.

Le Régulateur dispose de compétences très larges, y compris, ce qui est inhabituel dans l'Union européenne, la fixation des tarifs de transport et de distribution, tarifs régulés de fourniture.

Les obligations de service public sont précisées dans la loi mais les modalités détaillées ne sont pas connues :

- le service universel: obligation de connexion.

- la protection des consommateurs finals et la définition des clauses contractuelles

- fournisseur de dernier recours (art 12bis) : doit fournir pendant 3 mois, en cas de défaillance du fournisseur contractuel.

-Les ménages et PME peuvent bénéficier d'un prix régulé (art 12a et 28), même au-delà de janvier 2006 (100% ouverture).

- Le marché d'équilibrage est géré techniquement par CEPS, par périodes d'une heure, mais la comptabilisation des écarts est effectuée par l'Opérateur de Marché.

- priorité à l'électricité produite à partir de sources domestiques (jusqu'à 15%) et aux renouvelables.

Ces obligations n'ont pas été formellement notifiées à la Commission et une procédure d'infraction est en cours à ce propos.

DESCRIPTION OF THE MARKET

2.1 Electricity

2.1.1 Description of the market

On 1 January 2006 the Czech electricity market was fully liberalised, as the last customer category, households, became eligible to select its supplier. There is no regulation anymore of activities in which competition is feasible. Only activities of a monopoly nature continue to be regulated.

Three major entities are operating in the Czech Republic: the ČEZ Group, the E.ON Group and the PRE Holding Group.

Intensive talks took place between regulatory authorities, transmission system operators and other market participants (traders, pools) at the so-called mini forums of central and eastern

European countries, on the coordinated allocation of capacities for cross-border transmission of electrical energy in the respective regions. The ultimate objective continues to be the development of a transparent auction mechanism for the whole central and eastern European region, whereby transmission capacities will be sold together with energy.

The country's total electricity consumption in 2005, including network losses, was 69.9 TWh, which implies an increase of 1.9% in comparison with 2004. On 1 January 2006 the total installed capacity of power stations in the Czech Republic was 17,412 MW, with approximately 58% of the power stations' output connected directly to the transmission system and 42% to the distribution system.

The current structure of generation capacity by the size of installed capacities is as follows:

• 10,664 MW thermal power stations (61.2%),

• 3,760 MW nuclear power plants (21.6%),

• 2,166 MW hydroelectric power stations, including pumped storage (12.5%),

• 780 MW gas-fired and combined cycle power stations (4.5%),

• 42 MW alternative capacities – wind, photovoltaic, etc. (0.2%).

2.1.2. Functioning of the wholesale market

Il n'y a pas de marché de gros, et pas de liquidité du marché. Les producteurs indépendants d'électricité (25 à 30% de la production tchèque) ont des contrats avec CEZ et les distributeurs.

Les grands consommateurs demandent un monitoring des contrats bilatéraux et l'obligation de leur publication (une moyenne pour chaque catégorie) au niveau national et européen.

L'opérateur de marché (OTE), dépendant de l'Etat, assure la comptabilité du marché d'équilibrage qui est géré physiquement par CEPS. Il organise le marché spot, sur lequel un seul opérateur se fournit.

L'autorité de la concurrence joue également un rôle important dans le domaine de l'énergie.

Les enchères de capacité (Virtual Power Plants) portent sur 400 MW et sont utilisées par les traders. Les prix de plus en plus élevés ont été utilisés comme prix de référence et ont fait monter les prix de l'électricité, y compris en base. .

En janvier 2006, des traders ont vendu de l'électricité à des prix très élevés sans être couverts, payant leur électricité au prix de l'équilibrage et le gestionnaire de réseau de transport a dû faire appel aux gestionnaires de réseau de transport voisins pour assurer la sécurité du réseau.

2.2.3 Transmission and distribution companies

In the Czech Republic there is currently one Transmission System Operator (TSO) (ČEPS), three DSOs with more than 90,000 customers (PREdistribuce, ČEZ Distribuce, and E.ON Distribuce), which cover the largest part of the market, and 312 smaller DSOs.

DSOs with more than 90,000 customers have all carried out the legal unbundling of their activities, but not ownership unbundling. Smaller DSOs are not required to unbundle their activities.

The TSO has been a legally independent body since 1998. It is owned by the State and fully ownership unbundled.

2.2.3.1 Réseau de transport d'électricité

Les capacités du réseau tchèque sont suffisantes.

Les capacités des interconnexions sont insuffisantes et les projets d'extension de CEPS n'ont pas reçu de réponse favorable en Autriche et en Allemagne. Ces deux pays ont des incertitudes sur l'utilisation de la ligne au cours des 50 prochaines années, craignant un renforcement de la concurrence et étant confrontés à l'absorption de l'énergie éolienne.

CEPS essaie de mettre fin à l'allocation prioritaire de capacités pour un contrat de transit Pologne-Autriche, conformément à l'arrêt C17-03 de la Cour de Justice. Une procédure d'infraction a été ouverte sur ce point, mais la pression polonaise est forte.

CEPS promeut un centre de coordination (OCC) entre les huit gestionnaires de réseau de la région (même logiciel, mêmes procédures, un contrat standard) pour assurer des enchères communes et un calcul commun des capacités d'interconnexion. Ce centre servira la région centrale orientale. Une planification commune des investissements et de la maintenance est aussi nécessaire au niveau de la région. La création d'un tel centre est soutenue par la Commission européenne et va dans le sens des améliorations souhaitées dans le renforcement de la coopération des gestionnaires de réseau pour ce qui concerne la planification de leurs investissements.

On peut penser que les changements récents intervenus à la tête de CEPS n'auront pas d'impact sur l'indépendance du gestionnaire de réseau.

Congestion management

There are no bottlenecks in the Czech transmission grid; the grid is capable of transmitting the required volumes of electricity. No measures were taken vis-à-vis electricity market participants.

As regards electricity exports/imports and transit, the quantity of traded volumes is limited by the limited capacities of the lines on cross-border interconnections. The size of the available cross-border capacities depends on the physical electricity flows themselves and also on the contracted load at the respective border interconnection. The TSO offers all available cross-border line capacities using non-discriminatory market mechanisms, i.e., annual, monthly and daily explicit auctions are organised for all interconnections. In the case of the Polish, Slovak and both German interconnections, coordinated explicit auctions are also organised in co-operation with the neighbouring TSOs. In 2006 preparations are under way for extending the joint coordinated auctions to include also the remaining interconnection with Austria.

2.2 Gas

2.2.1 Description of the market

The liberalisation of the Czech gas market progressed in the period under review. Under the Energy Act, on 1 January 2006 all natural gas customers with the exception of households became eligible customers.

The process of unbundling in the Czech Republic started on 1 January 2006, when RWE Transgas was split into RWE Transgas, which stores and trades in gas, and its subsidiary RWE Transgas Net, which transports gas. The unbundling of the distribution system operator continues in line with the timetable approved by the Regulator for 2006, and in accordance with the Energy Act will be completed by the end of 2006.

Five eligible customers found, or switched, their gas suppliers.

In the second quarter of 2006 the Energy Regulatory Office adopted a number of measures related to the entry into force of Regulation 1775/2005/EC.

The Energy Regulatory Office issued a price decision effective from 1 July 2006, in which it set the price for booking one-day firm capacity. It also provided for a non-discriminatory and transparent approach to gas transmission by repealing the part of the price decision which meant unequal conditions for calculating the balancing tolerances, and also abolished payments for renominations.

On the basis of the proposal put forward by the TSO, the Energy Regulatory Office discussed and adopted the TSO's proposals for amendments to the TSO Code in line with Regulation 1775/2005/EC, incorporating primarily the conditions for executing gas transmission agreements based on one-day capacity. The TSO also submitted to the Energy Regulatory Office its code for transit transmission across the Czech Republic. The Energy Regulatory Office also requested the TSO to present its methodology for pricing transit services; it is now subject to thorough analysis.

The Energy Regulatory Office decided to apply its powers on prices, and proceeded to impose price controls taking the form of setting the maximum prices to eligible customers effective from 1 January 2006. These maximum prices apply to the service of natural gas supply and the service of natural gas storage provided by RWE Transgas and to the service of gas supply by gas suppliers who buy natural gas from this company. Since 1 January 2006, the situation has changed somewhat, because a new natural gas supplier has entered the Czech market – Wingas GmbH. In spite of this, the new player's share of the Czech gas supply market is negligible.

In 2005 the actual natural gas consumption amounted to 9.562 bcm (i.e. 100,828 GWh), which is 1.3% (129 mcm) less than in 2004

All final customers buying more than 15 million cubic metres of gas annually and producers generating electricity in CHP plants became eligible customers on 1 January 2005. On 1 January 2006, all customers, with the exception of households, became eligible customers. On 1 January 2007 all final customers will become eligible customers and the gas market will be fully opened up. Eligible customers' consumption currently accounts for about 70% of total annual natural gas consumption.

2.2.2 Transmission and distribution companies

RWE Transgas Net, which holds the exclusive gas transmission licence in the Czech Republic, provided for natural gas transmission across the Czech Republic under long-term agreements in place with Gazexport Moscow, Verbundnetz Gas, and Wintershall. The current capacity of the transmission system is such that neither physical nor commercial congestions occur.

Since 1 January 2006 RWE Transgas Net. has been the transmission system operator in the Czech Republic. Connected to the transmission system are the eight gas distribution companies, each of which has more than 90,000 final customers. In addition, approximately 105 smaller natural gas distribution licence holders operate on the Czech market.

2.2.3 Pricing for protected customers on the gas market

In the gas industry the Energy Regulatory Office sets the charges for gas transmission and gas distribution once a year, at all times effective from 1 January; the Office may change the prices of gas supply to protected customers once every three months. In 2005 the prices of natural gas supplies were reduced as from 1 April in response to a drop in the prices for which RWE Transgas, a.s. was buying gas, but as from 1 July the prices to protected customers were adjusted upwards. As from 1 October the prices of natural gas supply were increased markedly in response to the growing prices of competing fuels.

The price charged by a trader who supplies gas to protected customers connected to a distribution system is a double-component price. The basis for determining this price is forecasts of the development of natural gas import prices, and forecasts of the Czech currency's US dollar and euro rates. The price is also adjusted by the difference between the actual cost of gas purchase incurred by RWE Transgas and the price set by the Energy Regulatory Office in the preceding closed quarter.

2.2.4 Nouveaux entrants et nouveaux investissements

Le marché du gaz est complètement fermé et dominé par RWE. Un seul client éligible est approvisionné par Wingas. Ce sont les deux seuls fournisseurs qui ont une licence d'utilisation du réseau de transport.

Il n'y a pas de marché upstream car le pays est tributaire d'un seul fournisseur, la Russie. Le gaz norvégien, alternative pour la concurrence, est plus cher que le gaz russe, notamment à cause des coûts de transport. Le gazoduc Nabucco serait une alternative dans le futur.

Les nouveaux entrants éventuels sont confrontés à un problème d'accès au stockage.

RWE contrôle 6 des 8 Distributeurs et EON les deux autres.

3. PROBLEMES

Electricité et gaz

Le Régulateur

Le Régulateur semble compétent et indépendant du gouvernement et disposer d'assez de pouvoirs, permettant d'assurer un cadre réglementaire stable.

Le budget du Régulateur reste limité, ce qui l'empêche de procéder à des études extérieures pour approfondir certaines questions. Les ressources humaines (une centaine de personnes) paraissent insuffisantes pour réaliser toutes ses missions qui incluent le chauffage urbain, l'octroi des licences, l'élaboration des tarifs, y compris ceux de 'fournisseur de dernier recours '.

Le mandat du Régulateur peut être renouvelé plusieurs fois. Le précédent régulateur a été 'démissionné' en 2006 sans préavis ni compensation financière. Cette décision du gouvernement tchèque amène à questionner la capacité du Régulateur de résister aux pressions qu'il pourrait recevoir de la part du gouvernement, notamment pour ce qui concerne la fixation des tarifs de fourniture.

Dans ce contexte, le blocage des prix du gaz décidé par le régulateur au profit des clients éligibles pour une période de 18 mois est à mentionner et constitue une obligation de service public.

Séparation

1. en ce qui concerne le transport

CEPS, le Gestionnaire de réseau de transport d'électricité, est propriété à 100% de l'Etat, c'est à dire qu'il y a une séparation de propriété qui doit garantir son indépendance.

Selon l'opérateur de réseau tchèque, les gestionnaires de réseau de pays voisins ne disposent pas de son indépendance et ceci complique la coordination entre les différents gestionnaires de réseau de la région.

RWE-Transgas Net, le Gestionnaire de réseau de gaz, a été constitué le 1er janvier 2006 et est propriétaire du réseau de transport. Il est la propriété à 100% de RWE, qui fournit tout le marché du gaz à l'exception d'un consommateur.

Le stockage de gaz devrait être transféré dans la société de réseau.

2. en ce qui concerne la distribution

Depuis janvier 2006, CEZ et EON ont chacun regroupé leurs différents distributeurs en une société 'réseau', une société de fourniture et une société de services communs, mais avec le même nom. EON-Réseau est cependant une 'coquille vide' avec 10-12 personnes. Il n'y a pas eu de changement de nom. Depuis la réalisation de cette séparation fonctionnelle et légale au niveau de la distribution, la situation est plus facile pour les nouveaux entrants.

Les distributeurs se plaignent des tarifs peu élevés d'accès au réseau, liés à une évaluation trop basse des réseaux, ce qui les empêcherait d'effectuer les investissements de maintenance et de développement nécessaires, notamment en enfouissant les lignes. Il faut remarquer que CEZ a toutefois pu acheter des distributeurs à un prix jugé faible par les acteurs du marché et que les distributeurs reconnaissent que leurs réseaux sont en bon état.

La séparation des gestionnaires de réseau de distribution ne paraît pas encore pleinement réalisée.

3. changement de fournisseur

Dans le secteur de l'électricité

Suite aux restructurations il n'y a plus que trois grands fournisseurs d'électricité.

Il y a quelques fournisseurs (faible volume) qui ciblent les PME.

Les grands consommateurs ont profité de la baisse des prix résultant de l'ouverture à la concurrence en 2002 (éligibilité des consommateurs de plus de 40Gwh) pour changer de fournisseur ou renégocier leurs contrats. Mais depuis la consolidation de CEZ en 2004, les prix de l'électricité ont considérablement augmenté, car CEZ, dont les prix sont inférieurs à ceux des pays voisins grâce à des coûts de production très bas, peut être tenter d'aligner ses prix sur les prix allemands.

Le marché est totalement ouvert depuis le 1er Janvier 2006. A l'exception des grands consommateurs, le taux de changement de fournisseur est faible. Le Régulateur a payé deux campagnes d'information dans les journaux sur l'ouverture du marché et les procédures à effectuer. Il a développé un 'web calculator' permettant au consommateur de comparer les offres.

Les faibles marges disponibles sur le prix de vente de l'électricité ne poussent pas les entreprises à démarcher la clientèle des ménages. Il n'y a ainsi pas eu de campagne publicitaire de leur part.

Malgré des délais de 10 à 17 jours imposés pour le changement de fournisseur, les systèmes informatiques ne sont pas prêts Un nouvel entrant a signalé qu'il devait encore remplir manuellement les formulaires de changement de fournisseur dans le réseau CEZ (3,4 millions clients).

4. Prix régulés du gaz

Les ménages peuvent se fournir auprès du fournisseur en dernier ressort, désigné en premier lieu pour assurer la fourniture d'électricité en cas de faillite du fournisseur contracté. Le Régulateur a actuellement désigné les fournisseurs existants de chaque zone de distribution comme fournisseur en dernier ressort. Il examine d'autres méthodes de désignation (appel d'offres…). Le régulateur fixe un prix de vente (2.5CzKr, soit 9cents/kwh) pour cette électricité en dernier ressort.

Cependant suite à une augmentation jugée inappropriée par RWE du prix du gaz, le Régulateur a déjà imposé une amende et imposé un prix maximum pour la vente aux consommateurs éligibles de janvier 2006 à Avril 2007. Des discussions sont en cours avec le régulateur pour améliorer certaines mesures. L'autorité de Concurrence examine ainsi un éventuel abus de position dominante.

S'agissant de l'imposition de ce tarif réglementé de fourniture au profit de certaines entreprises, cette mesure aurait dû être notifiée formellement à la Commission européenne qui est seule responsable d'en évaluer la compatibilité avec les critères de l'article 3 de la directive 2003/55/CE et de l'article 86 du traité.

Selon l'opérateur de réseau, le blocage actuel des prix du gaz ne permet pas aux concurrents d'entrer sur le marché.

5. position dominante des compagnies

Dans le secteur de l'électricité, les groupes ČEZ et, dans une moindre mesure, E. ON, ont une position très forte sur le marché.

Dans le secteur du gaz, aucun échange de vues n'a pu avoir lieu avec le Ministère sur ce point lors de la mission sur place car aucun représentant de ce secteur n'a souhaité recevoir les services de la Commission

6. Réseau de transport de gaz

Les capacités disponibles sont suffisantes aux différents points d'entrée, ainsi que sur le réseau, tant pour le marché national que pour le transit.

Le marché d'équilibrage est trop pénalisant pour les grands consommateurs, ce que conteste le Gestionnaire de réseau de transport.

Comme il n'y a que deux acteurs, RWE-trangas invoque la confidentialité pour ne pas publier de données.

7. Stockage du gaz

L'accès au stockage est négocié et les prix sont très élevés, procurant de très importants bénéfices à l'opérateur dominant qui contrôle tout le stockage.

8. Conclusions

Le marché du gaz est complètement fermé et 'dominé' par RWE-Transgas, auquel le Régulateur a déjà imposé une amende et imposé un prix maximum. Le pays est tributaire d'un seul fournisseur, la Russie.

Il n'y a que 3 fournisseurs d'électricité. Les prix de l'électricité ont considérablement augmenté, car CEZ tente d'aligner ses prix sur les prix allemands, malgré des coûts de production très bas.

Les Tchèques sont très préoccupés par le nouveau modèle 'ITC' pour les compensations entre TSOs. La contribution tchèque (85 millions d'Euros) serait plus de 10 fois supérieure à leur contribution actuelle.

Même si la séparation juridique des distributeurs d'électricité a été effectuée, conduisant à des concentrations (3 distributeurs et fournisseurs au lieu de 8), on peut s'interroger sur l'effectivité de cette séparation.

Le Régulateur semble indépendant et compétent. Il en est de même de CEPS, le Gestionnaire du réseau de transport d'électricité.

DENMARK

Main issues

- **Market opening and competition:** Both electricity and gas markets are fully opened. The wholesale markets suffer from the dominant positions of market players. The retail market for households has a price cap, which effectively prevents competition developing.

- **Regulatory authorities:** There are issues regarding the Nordic market arrangements, particularly the capacity allocation between Eastern Denmark and Sweden and the connection to the Central European market, which have not been solved by the regulators. This calls for more regional and/or European regulatory powers.

- **Unbundling:** The TSO owns the transmission assets. DSOs remain mostly vertically integrated. It remains to be seen whether the level of unbundling is sufficient.

- **Transparency of the market:** Market transparency is high, even if there is still room for improvement.

- **EU integration**: The cooperation between the Nordic TSOs is good and can be considered as best practice in many areas, such as transmission planning. The cooperation between the Nordic regulators is good as well. However, unresolved problems like the capacity allocation between Eastern Denmark and Sweden call for further integration of TSOs and-problem solving mechanisms for regulatory authorities.

- **Public service obligations:** A price cap in the retail market for households seriously hampers the development of competition.

Overview of the regulatory framework

Denmark implemented the second electricity and gas directives by the deadline of July 2004. Full market opening was already achieved before this date.

The Danish Energy Regulatory Agency (DERA) is an independent body. Its secretariat is provided by the Danish Competition Authority. The regulator approves methodologies for network tariffs. The network tariffs are notified to DERA. At the moment, a moratorium on network tariffs is in place, fixing the average tariffs in real terms for each network company at the 1 January 2004 level. An incentive regulation with revenue caps for each company, dependent on benchmarked economic efficiency, will be introduced in 2008. The regulatory authority also decides on the price cap for default supplier tariffs, which aims to reflect the market price level.

Denmark opted for a full legal unbundling model for network companies. After the reorganisation of the energy sector, the TSO is fully owned by the state and could be considered ownership-unbundled. There are slightly more than 100 electricity distribution companies in Denmark. Most are exempted from functional unbundling. However, all network companies must draft compliance programmes and publish annual reports on compliance.

There is a close cooperation between the Nordic Governments on energy market issues. The Ministers set targets for market development and actively monitor the market. This forms the basis for the close cooperation between Nordic regulators and between Nordic TSOs.

Description of the market

Electricity

After the reorganisation of the energy sector, the generation market is now dominated by the newly restructured state-owned electricity and gas company DONG Energy. This former gas company has acquired most of the electricity generation sector. In the reorganization, a few large power plants were sold to Vattenfall, the Swedish state-owned electricity company. The generation market thus remains oligopolistic with two main generating companies and numerous smaller generation companies with distributed generation assets. There is some competition from Nordic and German generators through the substantial interconnection capacity. The Danish market is divided into two parts, East and West, without a direct physical link between them. Indirectly, they are connected through neighbouring countries. A physical link between Eastern and Western Denmark is planned for 2010.

Supply companies and big end-customers are able to buy electricity from the wholesale market. In practice, all buying from neighbouring countries involves trade via Nord Pool Spot. Interconnection capacity is at the disposal of Nord Pool Spot and trade involves the risk of zonal price differences as an integral part of the Nordic market splitting system, reflecting congestion in the transmission system. A product is available in Nord Pool to hedge against differences between Danish area prices and the Nord Pool Spot system price but hedging gives rise to extra costs and the product is not very liquid.

The retail supply market remains largely national. Electricity supply remains very much in the hands of the local companies connected to the distribution company. Customer switching is relatively common in Denmark for industrial customers: more than 50% of the customers are estimated to have either renegotiated their contracts or switched suppliers. In contrast, the retail market for small customers remains *de facto* closed due to the regulated default supplier tariffs. The Government has preferred price stability for small customers over creating competition on the retail market.

The balancing market is a combination of the Nordic market (generation bids from all Nordic countries are pooled) and national market (balancing price and settlement). In Denmark there are so few balancing and reserve power providers that the TSO is obliged to enter into bilateral contracts with the main producers. A number of initiatives are ongoing to reduce somewhat this dependency, including increasing the demand elasticity and the use of distributed CHP for balancing.

Renewable energy has high priority in the Government policy. Renewables support, despite the decline in recent years, remains at a high level. Money for support schemes is collected through network tariffs, thus contributing to high end-user prices. There is a large consensus in favour of continuing renewable energy policies. Support mechanisms have recently become more market-based, for example by exposing wind generation to market prices and by creating incentives for CHP generators to participate in the balancing market.

Gas

Denmark is a gas producing and exporting country. The Danish gas market is dominated by the state-owned company DONG Energy. The strong position of DONG Energy is based on long term contracts for upstream gas and capacity on upstream pipelines and for supply to distribution companies. Its position is strengthened by its ownership of the biggest gas-fired power plants and most of the gas storage capacity.

The new conditions imposed on DONG Energy (gas release programme equal to 10% of Danish demand and selling of the largest of the two gas storages to the Transmission System Operator Energinet.dk) go in the right direction, but will introduce competition only to a limited extent. In any merger case, the competition authorities are entitled just to mitigate the anti-competitive consequences, not to require initiatives to boost competition.

There are three gas distribution companies in Denmark: DONG Distribution, HNG Midt-Nord and Naturgas Fyn. On the initiative of the Danish Competition authority, the duration of their gas contracts was curtailed to a length no longer considered to be "long-term" by the European Commission's DG Competition. Statoil Gazelle is the only supply company with a substantial market share (about 20%) besides DONG. The market shares of other suppliers are very small.

For household customers there is a regulated default supplier tariff. The level of this tariff is so low that there is hardly any room for making a profit on supply. The regulation of the network tariff is incentive-based with an ex-post regulation of the return on capital depending on economic efficiency.

Issues

Electricity

Functioning of the wholesale market

Most market participants consider that the Nordic wholesale market works relatively well. However, the Danish generation market remains very concentrated, with the main possibility for competition being through interconnectors to the neighbouring countries. The generators seem to be able to lock prices between the Nordic and German rates, often close to the higher of the two.

For this reason the Danish Competition Council felt obliged to regulate the bidding behaviour of the main generator in the Western part of Denmark in the form of a price cap on bids. The price cap has been appealed and is thus not yet in effect. It remains to be seen how the new setup in the sector affects these arrangements.

Big energy users are worried about having to pay higher prices than in other Nordic countries. There is however a broad consensus on energy policy in Denmark, so these complaints are not being pushed very strongly by the big energy users.

New entrance and new investments

Generally speaking it is very difficult to enter the Danish market as a newcomer without buying existing companies. There is still sufficient generation capacity in Denmark, so new

large-scale investment in generation will not be needed for years. Additionally, the best sites for power plants are held by the existing generators. The Government is looking at siting policies that could help new entrants. Because of sufficient generation capacity at the moment, this would only influence investment in the long term.

Strong positive incentives exist for the development of renewable energies, where the national targets are also set at high levels. Entering renewable generation is also easier for smaller players.

Entrance on the supply side seems to be rather difficult in practice. New entrants have had difficulties in gaining profitable market shares. A number of foreign companies interested in supplying the Danish market have withdrawn. In the small customer segment, this is partly due to the regulated default supplier prices, which hardly allow any margins. The other influencing factor is the small share of the commodity in the final customer bill, as taxes and levies are so high that the potential savings for customers changing their suppliers are small in relative terms.

Transparency

The wholesale market is considered transparent. Extensive information on prices, on electricity exchanges between countries and on the availability of generation units and water reservoir levels is published on the Nord Pool and TSO websites. The balancing market is more problematic, as it is largely based on negotiated contracts between the TSO and the two large generators.

Nordic market and price areas

There is ongoing discussion as to whether the electricity market is Nordic or national. In a case against Elsam A/S, now owned by DONG Energy, for abuse of dominance in November 2005, the Danish Competition Council considered that the generation market coincided with the Western Danish price area. It concluded that the market was not a Nordic market for several reasons. However, the Danish stakeholders strongly support a North European approach, as this is seen as a way to have a competitive market in Denmark.

Maybe the most controversial issue at the moment in the Nordic electricity market is the handling of bottlenecks inside Sweden. The Swedish TSO often reduces the interconnection capacity to Denmark in order to maintain Sweden as a single price area. After the closure of the Barsebäck nuclear power plants in Southern Sweden, this is almost a daily occurrence in the winter months.

It has been proposed that Sweden should have more than one price area in order to give correct short-term and long-term locational signals. Several studies have looked into this issue but no solution has been found yet. A further study among Swedish stakeholders is under way.

There is a long tradition of Nordic co-operation at ministerial and TSO level, and the regulators cooperate under NORDREG. However, resolving problems like the handling of transmission constraints and harmonising approaches to e.g. reserve capacity has not been easy. The idea of a common Nordic TSO has been discussed for some time, but no decision to create one has yet been taken.

Interconnection to Germany

Capacity allocation at the interconnections to Germany has been discussed for some time between the TSO concerned and with other stakeholders. On the Nordic side an implicit auction has been the preferred solution, while the German side favours explicit auctions. One of the mains reasons in favour of implicit auctions is their ability to direct flows according to price signals. For the Kontek cable, an implicit auction was introduced in 2005 based on a Nord Pool price area in Germany. Technically, this has worked well, but the problem has been the limited liquidity with this price area.

The further development of implicit auctions is now being discussed in the Electricity Regional Initiative of Northern Europe.

Functioning of the retail market

The retail market for big and medium-sized customers is working relatively well, there is competition and several customers have changed suppliers. Small companies and households, however, remain with their default supplier, as there is hardly any interest in changing. On the one hand, the regulatory authority endeavours to promote competition by easing switching procedures and enhancing price transparency. On the other hand the regulated price cap for the energy component is so low that all suppliers sell more or less at the same price. This, combined with the high level of taxes, other levies and network charges, which are not subject to competition, creates a situation where consumers do not see much point in looking for best offers on the market.

Building of infrastructure

The Nordic TSOs have agreed on a Nordic Master Plan with five priority projects to be constructed in the first stage. Two projects interconnecting Denmark, i.e. the East-West connection and the Skagerrak IV cable to Norway, should both progress as planned.

Gas

Functioning of the wholesale market

In principle, any player can get gas to Denmark from Germany, as there is no congestion on account of Denmark being an exporting country. In practice, it is very difficult to get gas from North-Western Europe because the lack of liquidity on the market. The Swedish market is downstream from the Danish system, so this is not an option either. Consequently there is little prospect at the moment of real competition on the Danish wholesale gas market.

Functioning of the retail market

There is some competition on the retail market, but DONG remains by far the dominant player.

Infrastructure

In the longer term, new upstream pipelines, mainly from Norway or Russia, could provide new opportunities to increase competition. There are several projects of interest to Denmark. DONG has contracted gas from the North Stream pipeline to be built in the Baltic Sea.

Electricity and gas

Unbundling

With the reorganisation of the sector, the TSO Energinet.dk was created. It is considered truly independent by the stakeholders.

The supply and distribution companies remain very much integrated even if functional unbundling measures have been introduced. Close to 100% of customers remain with the default supplier. However, supplier switching is frequent for big customers, so the share of consumption subject to supplier switching is substantial.

Powers of the regulator

DERA is generally considered to have sufficient powers and resources to do the work assigned to it. Some stakeholders are of the opinion that the division of tasks between the Energy regulator and the Competition authority is not very clear.

Conclusion

The Danish government has preferred to create a national champion on the European energy market, hence reducing the scope for competition inside Denmark. Both the Danish electricity generation and gas markets are dominated by DONG Energy, and there is little prospect of improvement in the foreseeable future. Another big company is active in the electricity generation market, and price signals are imported from the Nordic and German markets. However, this is not sufficient to create real competition, as the interconnection capacities are limited. Moreover, DONG is able to optimise its own production and sale of gas and its own use of gas for power generation as a fully integrated gas and electricity company.

There is competition on the retail market for big customers. For small customers there is almost no competition due to regulated default supplier tariffs.

The creation of Energinet.dk was a very positive move by the government. This independent TSO can have a major role in finding a path towards a competitive market.

In conclusion:

The Government should pay considerably more attention to increasing competition inside Denmark.

A solution to the electricity transmission constraints in Sweden affecting the interconnection between Eastern Denmark and Sweden should be found as a matter of urgency.

Implicit auctions should be introduced for the interconnectors between the Nordic Market and the Central European Market.

Further unbundling of the distribution and retail business should be considered.

Default supply tariffs should be removed in parallel with the promotion of competitive retail markets, to allow the entrance of new suppliers and competition for small customers. The regulation of prices, if necessary at all, should be limited to specific vulnerable customer segments.

Better conditions should be created for entering the Danish gas market and importing gas in order to promote competition with DONG, including gas release programmes.

GERMANY

Main issues

- Market opening and competition: The German gas and electricity markets are both characterised by a high degree of vertical and horizontal integration dominated by very few large companies. In the electricity sector, this structure in combination with congestion at interconnectors as well as some specific problems related to network access is thought to prevent effective competition from developing and to increase barriers for new entrants and independent investments in new power plants.

- Regulatory authorities: The main provisions of the Internal Energy Market Directives have been implemented by the new Energy Act and are now followed up by the newly created regulatory authorities. Their work has already shown quite some effect on the market, but due to the complexity of the German gas and electricity markets, the desired results have not been achieved yet. The regulator has no competence for cross-border issues.

- Unbundling: According to the new German Energy Act, transmission system operators (TSOs) in the gas and electricity sector have to be unbundled in legal and functional terms. The law exempts all distribution system operators (DSO) serving less than 100000 customers from any legal and functional unbundling obligations.

- Transparency: None of the companies scrutinized by the BNA has fully met its transparency obligations, since companies are hesitant to publish information necessary to provide a level playing field on the market.

- EU integration: Congestion prevails at all German borders with the exception of Austria. Non-discriminatory, market-based and coordinated congestion management procedures in line with Regulation 1228/2005 are applied. Cross border trade remains severely restricted due to high and rising prices for cross border capacities as established by capacity auctions and few available capacities.

Overview of the Regulatory Framework

On 13 July 2005, the new Energy Act[2] entered into force thereby transposing the 2nd Electricity and Gas Directive[3] (2nd IEM and IGM Directive) into German law. The Energy Act was accompanied by a number of accompanying decrees detailing out some of the most essential aspects of the new Energy law. As a consequence, the regulatory framework as it emerges from the 2nd IEM and IGM Directives is almost complete, although some detailed Regulations on connection to the high and middle voltage grid are still missing.

In accordance with the Directives, the new Energy Act established regulatory authorities with competences in the gas and electricity sector, i.e. the Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen (BNA). The BNA is separated from the Ministry and enjoys the status of a Superior Federal Authority (Bundesoberbehörde).

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2 Zweites Gesetz zur Neuregelung des Energiewirtschaftsrechts, Energiewirtschaftsgesetz (EnWG)

3 Directive 2003/54/EC and 2003/55/EC

Powers and Competences

The BNA is fully responsible for the proper application of the new Energy Act. Regulatory decision-making is made by ruling chambers guaranteeing the independence of the decision-making mechanism. Legal actions against their decisions do not entail any suspending effect. They have a real effect on the market, such as the decision forcing Eon-Ruhrgas to offer firm capacity for transportation of the gas released in its gas release programme.

The BNA shares responsibilities with the Federal Cartel Office (FCA), when it comes to competition issues and market functioning in electricity generation as well as gas and electricity supply.

However, the BNA does not have any competences for security of supply affecting political issues and consideration, which might especially occur in the gas sector.

As a Federal Superior Authority, the BNA is subject to legal and substantial supervision of the Ministry for Economy and Technology. However, general instructions of the Ministry to the BNA have to be published and substantiated. So far, this has not yet been the case.

Unbundling

According to the new German Energy Act, transmission system operators (TSOs) in the gas and electricity sector have to be unbundled in legal and functional terms. The law exempts all distribution system operators (DSO) serving less than 100000 customers from any legal and functional unbundling obligations. Furthermore, the law has postponed the obligation to separate the network from the supply, trading and – in the case of electricity – generation business for those DSOs serving more than 100000 customers until 1 July 2007. Nevertheless, according to a study conducted for the Commission, some of the DSOs subject to functional unbundling have already carried out or are carrying out also the legal unbundling prior to the deadline of 1 July 2007.

These rules are in full accordance with the provisions of the gas and electricity Directive.

Electricity

In the electricity sector, there are about 900 vertically integrated undertakings subject to the unbundling provisions of the Directive. All of them have to run separated account (unbundling of accounts). 150 of these undertakings also have to follow legal and functional unbundling, however, as for DSOs and with respect to legal unbundling only until 1 July 2007.

Currently four out of seven TSOs in the electricity market are unbundled in legal terms and meet the main requirements in terms of functional unbundling.

For the remaining three TSO the BNA is conducting an investigation into the practical implementation of the unbundling provisions, the conclusions of which are not yet available.

A compliance programme, which among other things requires that the TSO be located in a separate building, is effective. The programme is regularly monitored by the BNA, which in the case of breaches, imposes penalties.

Gas

In the gas sector, the situation is less clear. While approximately 630 DSOs in the gas sector do not have to separate their grid in legal and functional terms, there are a number of TSOs that have unbundled in legal and functional terms. Some of them are involved in cross-border flows (five companies), while the rest of German TSOs (Commission estimates amount to around 20-25 undertakings) are only active on the German market. These undertakings considerably vary in terms of size and network operation.

A compliance programme is currently being developed.

A matter of serious concern, however, might be seen in the practical implementation of legal and functional unbundling measures by some TSOs, for example with respect to whether the dispatching centre has to be considered a part of the network operator or not. While it seems obvious that the dispatching centre has to be part of the network operator, in order to ensure the effects of legal and functional unbundling including confidentiality requirements, further clarification might be required, where this is not the case.

Despite some legal requirements designed to ensure confidentiality as well as legal and functional unbundling, questions may arise whether Chinese walls concerning the flow of information can really be taken for granted in a holding company.

Description of the market

The structure of the German market for both gas and electricity is very similar to a complex web made up of companies operating at several levels. This web is characterised by a high degree of vertical and horizontal contractual connections and economic interdependence between the companies involved.

Electricity

Total installed generation capacity in Germany amounts to 132,3 GW and net electricity consumption is 536,8 TWh. 29% of the net electricity consumption comes from nuclear power followed by lignite (26%), coal (21%) and natural gas (10%), while renewable sources account for 12%. There are four large producers of electricity (RWE, Eon, Vattenfall and EnBW), the accumulated market share of which would amount to 90% of total electricity generation.

Approximately 900 electricity undertakings operate their own electricity networks on the German market, out of which less than 10 would qualify as TSO in the sense of the 2nd Electricity Directive, while the remaining ones would transport electricity on high-voltage, medium voltage and low voltage distribution systems.

In terms of electricity supply, each of the four large companies holds a market share of much more than 5% and the market share of another 6 companies range from 0.9% to 2.1%. Together, these ten companies supply more than 60% of total German electricity consumption, while the remaining balance is mainly made up by private generators (wind) and municipal utilities.

The cross border interconnectors are operated by the four large ones, which are closely interlinked with the utilities at the regional and communal level. Following market opening at

the end of the 1990s, mergers at all level of the German electricity market (extra-high voltage, high voltage, mid voltage and low voltage interconnection level) increased horizontal and vertical concentration and created the currently prevailing structure dominated by the four large electricity utilities mentioned above. The current structure simplifies implicit coordination of the behaviour of the big four. It also seems to entail enhanced scope for manipulative influence of the wholesale markets by one-sided measures of one single enterprise.

A number of foreign undertakings in Germany have set up affiliates or acquired shares in electricity companies, e.g. Vattenfall, EDF, Electrabel, Essent and Nuon. In addition, there are between 100 – 150 new market entrants on the German market including new companies set up by incumbent companies. They are mainly active in the industrial sector, only very few competitors are striving for market shares in the household sector. In this context, it is worth mentioning that many independent electricity suppliers already abandoned their business because of insufficient business prospects.

Gas

Like the electricity market, the German gas market is characterised by a multi-tier structure containing five big companies (Eon-Ruhrgas, RWE, VNG, Wingas, BEB) at the import and transmission level, another 24 companies at regional transmission level, and approximately 720 companies operating at the local distribution level.

Germany disposes of a relatively diversified gas supply portfolio containing domestic production (18% of total gas supply), imports from EU Member States (22%), mainly the Netherlands (18%), but also from Norway (26%) and, as by far the most important supply source, Russia (37%). Actually, all gas imports are contracted by the five big companies, which also operate approximately 80% of the existing storage capacity.

The German gas transmission system is operated by the five big companies plus a number of regional transmission companies. Due to the entry into the market of Wingas, a joint venture of Wintershall and Gazprom, in the early 1990s, some parts of the German gas transmission infrastructure run in parallel and are operated by two different system operators.

There are no figures available on market shares in the total supply market. In general, the traditional supply patterns prevail. Like in the electricity sector, most of the incumbent companies have acquired minority stakes at the level of municipal utilities, which are usually supplied by long-term contracts.

New market entrants are very few in the natural gas sector putting aside foreign stakeholders, which have acquired utility stakes.

Issues

Electricity

Functioning of the wholesale market

Despite the relatively high number of companies active on the German electricity wholesale market, the market can hardly be described as a buyer's market. The main reason for this observation must be seen in the fact that 90% of total German electricity generation is controlled by the four large producers and their associated trading sister companies and

affiliated companies. According to all kinds of electricity network users, this explains why the relatively high number of traders does not alleviate market power, although the market is – on the other hand – often described as a quite open market.

This problem is aggravated by a number of other factors:

cross border congestion and, as a consequence, explicit auctions, which are often considered to result in too expensive capacity.

Horizontal and vertical integration through a high number of shares in vertically integrated companies, mostly DSOs, and their affiliates. This leads to market foreclosure, since many municipalities under these circumstances often stay away from independent electricity suppliers/traders.

Important fuel suppliers are also direct competitors in electricity generation: examples are Eon-Ruhrgas with gas and RWE and Vattenfall with their production of lignite.

Market opening at the end of the last decade entailed the quick establishment of an electricity wholesale market, which today has developed into the European Energy Exchange in Leipzig (EEX). According to many market participants, the EEX sets the prices in many industrial electricity supply contracts.

Since independent suppliers do usually not posses enough generation capacity, they depend on the wholesale market to buy the electricity needed, if – as mentioned above - imports from abroad fail. This leads to the dominance of very few producers/traders, who, according to the German Monopoly Committee, could exploit the very inelastic electricity supply and demand in the short term with a view to manipulating prices by strategic supply behaviour.

Insufficient transparency and liquidity perceived by many electricity consumers at the EEX and the fact that spare capacity is mothballed and thus could be used to keep prices high seem to confirm that EEX prices are dominated by the big four.

Windfall profits

Almost all parties on the German electricity market seem to agree that the electricity companies have been and are treating the CO2 allowances as opportunity costs, which are incorporated in the electricity prices. According to calculation of the German industrial energy consumers, this leads to enormous windfall profits for the electricity utilities amounting to € 5.6bn per year in Germany.

Cross border trade

Congestion prevails at all German borders with the exception of Austria. Non-discriminatory, market-based and coordinated congestion management procedures in line with Regulation 1228/2005 are applied.

Cross border trade remains severely restricted due to high and rising prices for cross border capacities as established by capacity auctions and few available capacities. Therefore, an efficient use of cross-border capacities including counter-flows, the possible introduction of implicit auctions and mandatory use of revenues gained from capacity auctions for investment at congested points is suggested. This would also require enhanced cooperation between the regulatory authorities concerned.

Long-term capacity reservations still exist at interconnectors exporting electricity to France and the Czech Republic. These arrangements are currently subject to investigations of the BNA.

Switching

In 2005, 826 000 customers have changed their electricity suppliers with an average cost per change of supplier amounting to € 108. The overall switching rate, referring to final consumption, i.e. the share of electricity in final consumption used by the customer changing supplier is 7,8%.

Price and tariff issues

Electricity network users in Germany generally complain about the too high level of network access charges, which is said to be clearly above the European average. A big spread between highest and lowest fees amounting to 66% for the high voltage grid, 120% for the medium and 107% for the low voltage grid is said to exist.

The BNA has issued first authorisations resulting in a considerable reduction of access charges ranging from 8% to 18%.

From 1 January 2008, the regulatory approach on access charges will introduce incentives, in order to realise efficiency gains in the network operation. This will be achieved by de-coupling of costs and regulated revenues.

The German wholesale market for electricity experienced sharp increases of wholesale prices in 2005: for base load, the average price in 2005 grow by 61% compared to 2004, while the corresponding figures for peak load rose by 65%. Strong price increases were also observed for futures traded at the EEX, which often serve as a reference price in the retail sector.

From the point of view of the German electricity industry, the high electricity prices have mainly to be explained by a rising demand for energy and primary energy sources at global level and the impact of wind power, which in particular in Germany is said to play a crucial role. Although the market would allow for reaction to high electricity prices, long lead times for investments do not allow bringing new capacity on stream at short notice.

Not surprisingly, the rise in wholesale electricity prices is fully reflected in individual supply contracts. Since almost all contracts are linked to EEX-prices (either future or spot prices), tendering a supply contract does not bring about competition.

Balancing market

Market participants agree that the balancing requirements emerging from European legislation are properly implemented by law.

With the only exception of a company from Austria, there are so far only German participants active on the balancing market. The overall number of participants on the balancing market is restricted due to the fragmentation of the market into four balancing zones, but also through technical requirements of network operators.

Role of renewable energy

On the one hand, the EEG[4], the German law to promote renewable energy, is estimated to have increased electricity prices for households by 10%.

On the other hand, the electricity industry points out that the obligation to feed in electricity generated by windmills has increased infrastructure costs due to the fact that windmills have to be situated according to prevailing wind circumstances, which are often far from the consumption site of the electricity.

The obligation to feed in electricity generated by windmills is apparently also used by the industry to refuse the connection of new generation capacity, or enable it only on condition that a capacity study is paid.

According to some network users, these arguments might sometimes also be (mis-) used with a view to justifying refusal of access.

New investment and market entrants

According to industry sources, 30000 MW of new generation capacity should be put on stream by 2012, out of which 50% is said not to come from the big four and 36% are said to come from new market participants. The BNA indicated planned investments in the order of 23200 MW by 2016 accounting for 19.5% of total capacity installed. Installed net capacity of power plants with a minimum of 25 MW increased in 2005 by 1700 MW.

In economic theory, high electricity prices are thought to promote new investment in generation. In practice, however, there are a number of impediments and considerations aggravating or even preventing investments in generation capacity by new market participants.

Many market participants pointed to economic investment hindrances, which, according to them, might best be described by "spontaneous behaviour in solidarity". It means that whenever one of the four large generators of electricity moves in a certain direction, the other three would "spontaneously" and "in solidarity" follow the move. Consequently, there is no competition between the big four, but just a kind of tacit agreement not to harm each other and to jointly benefit where possible. This creates significant uncertainty whether a certain investment will over time turn out to be economically viable or not and results in fears that new power plants may eventually turn in "sunk costs".

There is so far no concrete evidence, which would allow the competent authorities to take appropriate measures. According to German authorities, existing capacities are not fully used and the companies dominating the German electricity market pursue a "profit before quantity" policy.

Other market participants with plans to invest in own generation capacities complain about difficult conditions with respect to the location and the infrastructure costs entailed by new generation capacity, i.e. increasing the network capacity. In this context, some market

[4] Gesetz zur Neuregelung des Rechts der Erneuerbaren Energien im Strombereich, Erneuerbaren Energie Gesetz, figure from "Energieversorgung für Deutschland, Statusbericht der Bundesregierung, März 2006

participants complain about a certain lack of reliability of a new power plant connection: existing capacity rights of old power plants replaced and operated by the incumbent companies seem to enjoy priority vis-à-vis new power plants of new entrants (grandfathering rights).

It has also been said that some regional network operators pass feed in restrictions accruing from priority access of RES in a biased manner on to new power plants rather than equally distribute among established and new power plants.

For the time being, there is no regulation on connection of new power plants to the high or mid voltage grid, a fact, which is thought to increase existing uncertainties newcomers may face.

A growing trend can be observed for investments in electricity infrastructure. It amounted to 643 Mio € in 2005, while in 2006 800 Mio € are expected. Cross border capacity has enjoyed investments of € 25 million from 2002 to 2005.

Functioning of the retail market

The retail market, too, is still very much dominated by the large four companies currently holding a share in the retail market of around 50% in 2004. In 2005, this figure is expected to decrease further to a level between 48 and 49%.

There is a mixed picture as far as competition on the retail market is concerned. While some industrial electricity users confirm that competition is generally working and that it is possible to receive offers from different suppliers, other seem to suffer from too high and non-competitive prices. The contractual arrangements available often do not fit the needs and special consumption features of the energy intensive industry, i.e. there are no long-term contracts for the supply of base load with a reference to production costs plus an appropriate profit. Instead, prices are indexed to the EEX.

In the household sector, there are mainly three competitors, but new market entrants are expected to come soon. Not surprisingly, there is less competition than in the industrial customer segment.

Transparency

While the legal framework of transparency is broadly considered sufficient, the practical application and implementation of these provisions is generally perceived rather critical. None of the companies scrutinized by the BNA has fully met its transparency obligations, since companies are hesitant to publish information necessary to provide a level playing field on the market.

For a well functioning internal market, a level playing field in particular in terms of timely access to information is indispensable, as otherwise unfair disadvantages incurred by new market entrants cannot be avoided or even alleviated. In that respect, many elements with respect to non-discriminatory information are considered crucial, such as information on generation and outages, information relevant for price formation, actual load, congestion and cross-border flows etc. Many of them are still missing on the German market including the EEX, where the improvements recently introduced are acknowledged, but not considered

sufficient. In particular data, which allows comprehending price formation, and would therefore be key for a level playing field, is still incomplete.

Network access

In electricity, network access as such is not perceived as a major problem. Many discriminatory elements in the network access system had already been gradually reduced through the 2nd association agreement (VV II), so that the main barrier for effective access to the electricity grid had been seen in the high access charges. Indeed, they effectively have reduced the potential of competition, but are now being scrutinised by the BNA (see above).

Network connection

Network connection of new power plants is a legal requirement pursuant to § 17 of the new Energy Act. So far, however, a decree laying down how to implement these provisions is still missing for the high and mid voltage grid. Two TSOs have declined a request to connect for different reasons. The BNA was informed and involved.

Gas

Market structure

The German wholesale market is broadly divided between a few large wholesale companies, all of them importers of gas from different sources. They supply gas more or less in line with traditional supply pattern developed under the demarcation treaties in force before 1998. In the 1990s, Wingas, a joint venture between the 100% BASF affiliate Wintershall and the German Gazprom introduced competition in the German gas market by building a pipeline system of its own. Meanwhile, Wingas has acquired a market share of 12-15% of the German market, mainly through customers supplied along its network.

By far the largest company, Eon-Ruhrgas holds shares in approximately 30% of regional distribution companies, thereby effectively dominating the German gas market. Thüga, a company holding minority stakes in gas many gas distributing and supplying companies and actually fully owned by Eon-Ruhgas, controls the purchasing policy of these companies thereby securing the market share of its mother company, which is estimated at 60% of the German wholesale market.

The market is suffering from a lack of liquidity in terms of both capacity and commodity, a fact, which can be attributed to a number of reasons such as long-term supply contracts in the internal market, contractual congestion in the pipeline preventing new market entrants from acquiring capacity as well as a certain hesitation on the side of large gas producers (including external producers) to sell gas to new market entrants. The not yet completed implementation of the new energy law (see below), which, among other things, may also include incomplete unbundling in practice, may represent another major reason in that regard. An example could be cross subsidies between different customer segments, such as industry and households, but also cross subsidies between the transport part and the supply part of a vertically integrated company.

Generally, market entry remains difficult for new market participants. Insufficient access conditions to the network (see below), but also a certain lack of transparency in terms of wholesale prices are mentioned in this respect.

The latest gas release programme carried out by Eon-Ruhrgas as a consequence of the merger between Eon and Ruhrgas might bring about some improvements following a decision of the BNA that transport of the gas acquired under the gas release programme on a firm, rather than interruptible basis, is obligatory. The interest in the gas release programme has increased considerably and the gas release was said to be a success for competition.

The retail market is not transparent and likely to be controlled by a few players benefiting from vertical and horizontal integration as a consequence of previous mergers and acquisitions. Supply contracts to the industry are usually concluded on an annual or biannual basis with most prices indexed to oil, however, sometimes fixed prices over a period of 1 to 2 years can also be found.

As for the household sector, competition has been much discussed in the light of growing household prices, but not yet implemented.

Price issues

According to Eurostat figures, German gas prices for household and industrial consumers (without taxes) are among the highest in the EU25, almost 30% above the average price for the Euro area (12 Member States) as for industrial users and more than 20% above the average for household customers.

The cross border price has risen by 36% from 1.18 to 1.61 ct/kWh from 2004 to 2005. Retail prices for the industry are reported to amount to 4.28 ct/kWh, for commercial customers to 5.67 ct/kWh and for households to 6.14 ct/kWh.

It is worth noting that due to the lack of a liquid gas exchange there is no transparency as far as wholesale prices are concerned.

The current price setting mechanism does not only link gas prices mainly to oil, but defines also the difference between the oil and gas price, which is maintained in the gas supply contracts. Due to the lack of a liquid gas exchange, this mechanism is not challenged. To the contrary, the combination of long-term supply contracts, the oil price index and the lack of exchangeability are interlinked and reinforce the lack of liquidity, but also the lack of transparency with respect to wholesale prices.

The issue of long term contracts

Most municipal distribution companies, are supplied under long-term supply contracts, many of them with a duration of 20 and more years. According to the Federal Cartel Office (FCA, Bundeskartellamt), these contracts entail a foreclosing effect to the market unduly tying the distribution companies to their upstream suppliers and thus preventing any competition accruing from new market entrants from developing.

Following attempts to find a solution on a voluntary basis, the FCA adopted a decision under the Cartel law according to which the long-term contracts have to be modified in a pro-competitive way. The relevant German court has recently confirmed this decision.

Network access

The most contentious issue on the German gas market, for the time being, is the network access model to be applied.

After months long negotiations between the BNA and the associations representing the network operator (BGW and VKU), the German market was divided into 19 market areas[5]. This means that within one market area a network user indeed does only need one entry and one exit contract. However, it also means introducing distant related elements through the backdoor, since entry and exit capacities have to be booked at each market area.

For the time being, there are two competing network access models which exist in parallel: the "two-contract model" (Entry-exit) or the so-called "single booking model" ("Einzelbuchungsvariante"). It is expected that implementing the two-contracts model would have a significant competitive effect, whilst the single booking model, is expected to maintain existing supply patterns. Recently, the German Regulator (BnetzA) ruled against the use of the single booking model on the basis of incompatibility with existing legal provisions in a case launched by network users against three grid operators. It is expected that the ruling will create a precedence with an effect on all other operators currently using the single booking model.

Putting aside the issue of the network access model, there are in addition a number of further weak points with respect to a network access rendering the German gas market more competitive: they mainly concern the lack of horizontal cooperation between the large network operators who point to pipe-to-pipe competition in order to justify it; a lack of transparency with respect to physical, contracted and available capacities; large uncertainties with respect to the transportation tariffs (many of them are not yet approved by the BNA or are based on the association agreement from 2000 implying a spread of up to 300%); balancing rules and storage are not yet sufficiently included in the network access model.

The most important criticism, however, might relate to the missing legal obligation of TSOs to introduce an access model encompassing the whole federal level of Germany.

Access charges

Access charges are said to figure among the highest in Europe and show a spread up to 300%.

The German Energy Act allows an exemption from cost based tariff setting, if there is actual or potential pipe-to-pipe competition. In this event, market based mechanisms shall be applied. 13 companies have filed an application for exemption from cost based tariffs, instead aiming for tariffs approved by the BNA by means of a benchmarking (including international benchmarking) approach.

This exemption rule certainly represents a privilege of TSOs that seems hard to justify from the point of view of competition. Non-discrimination and avoidance of unduly high tariff charges can best be assured by cost-based tariffs, in particular, if the network operators concerned are not entirely (i.e. also in terms of ownership) separated from their supply affiliates.

On the basis of the information received and in the light of recent years' experience, it remains extremely doubtful, if these provisions in the German Energy Act will contribute achieving a competitive natural gas market.

[5] A market area can contain a number of local distribution network operators.

Switching

The overall switching rate in 2005 is very tiny amounting to 0.4% of total gas consumption. The figure was slightly higher for very large industrial users (0.74%), but remained far below average for other industrial users (0.12%) and households (0.01%). In total, 302 customers changed supplier in 2005.

Capacity issues

The overall capacity situation seems to be characterised by contractual and physical congestion. BNA figures would point to a considerable scope for congestion management measures designed to increase the efficient use of the system and to alleviate contractual congestion.

Only a third of non-local operators has concluded interruptible contracts and that only one TSO offers interruptible capacity on the basis of unused, i.e. not nominated capacity. Congestion management procedures, such as the rucksack principle at exit points have only been executed very rarely. A few auctions have been carried out, but met strong criticism from newcomers. For them, auctions would raise transport costs up to a level, which accounts for 50% of total costs.

Due to the lack of firm capacity available, newcomers and traders often have to rely to a large extent on interruptible capacity.

Capacity trading, as required by the law has been enabled by half of the German TSOs.

Balancing

The situation of the balancing regime so far remains entirely unclear, partly due to incompatible reports from network users, partly to incomplete implementation of the legal provisions.

Generally, there is no balancing market in Germany so far, which renders the efficient procurement of energy to avoid penalties impossible.

Some network user would prefer a daily instead of an hourly balancing regime as required by the German Energy Act.

Transparency

Generally, it can be said that the transparency requirements accruing from the Directive, and consequently the German Energy Law, and the Gas Regulation are considered sufficient by market participants, but have not yet been implemented by the companies concerned. With respect to transparency, the picture therefore remains unclear and not satisfying.

Storage

Practically speaking, the German storage market is not open: almost 100% of storage capacity is contracted by incumbent companies, only 1-2% can be made available. Current conditions generally are considered not to be transparent and many users are very unhappy about the range of services offered (e.g. bundled or unbundled services). Users do usually not have a

choice between different storage operators (albeit otherwise claimed by the SSOs), since they are often bound to a specific storage facility for technical and/or economic reasons.

Conclusions

Electricity

The main problem in the German electricity sector is the high vertical and horizontal concentration. It is thought to create economic investment hindrances and thus contributes to preventing new market entries by means of investments. Where market participants are ready and/or able to overcome these economic investments hindrances, they may face grand fathering rights of old power plants, thereby aggravating, if not disabling access and connection to the network.

Furthermore, there is no relief from other Member States due to prevailing cross border congestion, which could be, but indeed are not sorted out by investments aiming at capacity increases.

Most of these issues point to insufficient unbundling in that the interest structure of TSOs still seems to be influenced by supply interests of incumbent companies. TSOs that are fully independent could bring about improvements by facilitating connection to the network and undertaking capacity increases provided the necessary regulatory incentives were in place and, in the case of interconnectors, coordinated between the regulatory authorities concerned.

A high level of overall transparency in the wholesale electricity market including appropriate information on generation etc thereby creating a level playing field for all market actors is also deemed to improve the situation, as it may enable new market actors to identify quickly potential niches and market opportunities, otherwise left to incumbent companies.

In the mid and longer term, this could help to stimulate competition, which, for the time being, is mainly impeded by the high level of concentration, as represented by four large electricity companies in the German electricity market.

Gas

Like in electricity, the high vertical and horizontal concentration across the market represents one of the major impediments to competition in the German gas market. Overcoming insufficient network access conditions, however, in combination with a solution of the issue of long-term supply contracts on the downstream market could bring considerable improvements. The regulatory and competition authorities should fully exploit their powers and competences in this respect.

Yet existing cross subsidies (vertically and horizontally) as well as implementation of unbundling provisions in practice, are still a problem in the German gas sector and point to the need to reinforce current unbundling provisions. In addition, the lack of horizontal cooperation between TSOs on the ground of pipe-to-pipe competition further aggravates the situation, while the currently very low level of transparency is expected to improve by strict application of Regulation 1775/2005.

Finally, access conditions to storage as an indispensable tool to enable efficient access to the system are far from being satisfying, in particular as far as transparency and the range of services are concerned.

ESTONIA

Main issues

Market opening and competition: Having been granted a derogation, Estonia electricity market is to be fully opened only by 2013. Despite a regulatory framework that in substance seems to be in place, there is in practice no functioning electricity and gas markets in Estonia because of the quasi absolute dominance of the incumbents and the lack of viable alternative source of competition. Effective competition is unlikely to develop in the short to even mid term, or arguably longer for gas for which Russia will remain the only supplier.

Unbundling: Legal unbundling is in place. In the law, functional unbundling is in the process of being completed, but in practice remains in substance devoid of use considering the absence of alternative suppliers.

Regulatory authorities: The Regulator is generally considered to be independent although this is not enshrined in the law. The regulator has no competence for cross-border issues. Strong coordination with the other Baltic regulators is absolutely needed to enable the development of Baltic markets.

Transparency: Considering the absence of functioning markets, it is premature to reach conclusions on transparency issues.

EU integration: The Estonian markets are too small, so that competitive markets can only develop on a wider scale, including at least the Baltic countries. Increased cooperation of Baltic TSOs is an absolute must. The Baltic States are well connected with each other and with Russia but lack interconnections with the rest of the EU.

Overview on regulatory framework

The Electricity Market Act of 2003 sets out the rules for the electricity market. Estonia negotiated in the accession a transitory period for market opening of the electricity market which is too take place in two steps: 2009 for the big consumers (35% of the market) and in 2013 for all. About 10% of the market is currently open.

Market opening to non domestic gas customers date back from the 1998 Energy Act, confirmed in 2003 by the Natural Gas Act entered into force. This represents 95% of the market. As from the 1st July 2007 households will also be eligible.

Estonia implemented the second electricity directive by summer 2005, counting about one year delay compared to the deadline of July 2004. It is subject to an infringement proceeding with a reasoned opinion being sent in December 2006 for failure to implement some provisions of the Electricity Directive This includes functional unbundling of the network company, allocation of interconnection capacities, the existence of a regulated price for eligible customers and tendering of new capacities.

The gas law was only adopted at the end of 2005 which has led the Commission to withdraw its infringement procedure for non notification of implementing measures. Its compatibility with the Directive is being reviewed.

The Estonian regulator, Energiaturu Inspektsioon is an independent agency under the Ministry of Economy and Telecommunications. It regulates not only network tariffs but also end-user supply prices.

There is co-operation between the Baltic states and Baltic regulators on energy issues. The Baltic Council of Ministers adopted already in 1999 a Baltic Energy Strategy. A resolution by the Prime ministers and an agreement between regulators was made in 2002 in order to establish a Common Baltic Electricity Market (CBEM).

Description of the market

Electricity

The Estonian electricity system has been built up as part of the north-western common power system of the former Soviet Union. The Estonian's transmission network is therefore not part of the UCTE but of the IPS/UPS system including Russia, Belarus and Baltic states, where the main actor is the Russian incumbent RAO-UES.

The Baltic grid was designed to be operated as a single system, for that reason the interconnection capacity between the Baltic states is high, with interconnection capacity with e.g. Latvia of about 1000 MW. The Baltic TSOs have a co-owned company DC Baltija to do some co-ordination tasks of the network operation. Now this company will be dismantled and the tasks are transferred to BALTSO, a newly founded Baltic TSO association.

The Estonian electricity market is one of the smallest in the EU with a domestic consumption of 6,4 TWh.

The dominant electricity company is Eesti Energia, a 100 per cent state-owned vertically integrated public limited company, and the biggest Baltic energy utility. It is the quasi monopolist generator in Estonia with 97% of production capacity (the national oil shale capacities accounting for 93%). It controls both transmission and 85% of the distribution networks. In 2005, it sold about 6 000 GWh to the domestic market and 1 700 GWh for exports to other Baltic countries.

Because of the derogation, the current market opening is10%, which corresponds to 10 customers. The transitory period was asked to ensure the continuation of the national electricity production from oil shale, which is considered important by Estonia in order to be less dependent on imported fuel and for social reasons.

Regarding unbundling, the electricity transmission system operator OÜ Põhivõrk is legally unbundled from Eesti Energia. The dominant distribution company, OÜ Jaotusvõrk, is also legally unbundled from Eesti Energia since 2004. There are 42 distribution companies altogether which makes most of them extremely small considering the Estonian market size. Unbundling is required for distribution companies with more than 100.000 customers, with the consequence that OÜ Jaotusvõrk is the only operator under legal unbundling obligation.

The Electricity Market Act imposes on Eesti Energia the obligation to supply electricity at a regulated price for eligible customers. This seems top act more as price cap as the vast majority of customers are supplied at a price below the regulated price.

Balancing market is developing because the agreement between RAO and Baltic utilities on balancing is evolving requiring that the Baltic states balance their own networks.

Gas

As for electricity, the gas supply network historically formed part of the Soviet gas supply system. Estonia has therefore cross-border connections only with Russia and Latvia and the only source of supply is Russia.

The gas market is very small with a 2005 consumption of 990 000 thousand m3. The largest share of the gas is used for industrial purpose and heating, only a small amount for electricity production.

Eesti Gaas is the transmission company, importer and the major distribution and supply company accounting for 97% of the market. Its bigger shareholder is Gazprom (37%), followed by Eon Ruhrgas (33%) and Fortum (17%).

Regarding unbundling, the gas transmission system operator is legally unbundled from Eesti Gaas since the end of 2005. Its 100% owned subsidiary, Võrguteenus, is a combined operator providing both transmission and distribution services. Võrguteenus has a market share of 97%.

There are 24 smaller distribution companies, accounting for 3% of the market, which makes most of them extremely small considering the Estonian market size. There are not legally unbundled as under the Natural Gas Act, distribution system operator shall form a separate undertaking if the number of customers is over 100 000 (there is actually no distribution network operators with more than 100 000 customers in Estonia, even Eesti Gaas having only 60 000 customers but being unbundled as a combined transmission and distribution operator).

Võrguteenus has separate accounts for transmission and distribution. The other distribution network operators have separate accounts for distribution services and sale.

There is no price regulation for wholesale and sale to eligible customers.

Under the Competition Act, Eesti Gaas, as an undertaking with a dominant position, is under the obligation to sell gas to all customers connected to other networks at equal conditions.

Issues

Electricity

Functioning of the wholesale market

Despite the current theoretical market opening of 10%, there is no effective electricity market in Estonia. The derogation obtained in the treaty of accession to the EU limits market opening to the 10 biggest customers. Only one out of them is purchasing electricity from a supplier other than its own network service provider. In practice the eligible customers buy from their distributor. Currently there is no any independent reseller.

The market is therefore extremely concentrated with Eesti Energia having a market share of 99 per cent of the wholesale market.

The second largest distributor Fortum Elekter and the third largest Narva Elektrivõrk have shares, respectively, of 3 and 2,5 per cent.

Eesti Energia is already a significant exporter to the other Baltic countries and would like to increase its exports which are limited by the regulated frameworks in Latvia and Lithuania.

A major issue is import of electricity from Russia. If imports from Russia were allowed, Russian producers could easily enter the Estonian market benefiting from the strong interconnections and lower prices due to cheap gas and less strict environmental rules.

Functioning of the retail market

Non-eligible customers are obliged to buy electricity from their network operator, and have therefore no possibility to change supplier.

Eesti Energia has a market share of about 88 per cent of the retail market.

Generation capacities

The Estonian regulator does not foresee lack of capacity before 2012. Specific problems may arise in 2016 when the oil shale production will have to comply with the emission limitations provided for by the Directive on large combustion plants.

Implementation of Market Opening rules

Although the legal framework would seem to be broadly in place, absence of any effective market opening means that it is not implemented.

Eesti Energia's transmission and distribution companies, OÜ Põhivõrk and OÜ Jaotusvõrk, are under the duty by the Regulator to establish a compliance programme as regards mainly non discrimination. This was done in May 2006 and is seen favourably by the Regulator. In practice, however, although access tariffs are determined by the Regulator, there is no third party access taking place. In Summer 2006, chinese walls also did not seem to be fully in place yet.

Building of infrastructure

The Estonian network has enough capacities but needs strong investments for refurbishment. The main distributor considers the rate of return for network access to be insufficient to allow for these investments to be made.

The main issue is the complete lack of interconnection between the Baltic market and the rest of the EU.

The Estlink project connecting Estonia to Finland, with a capacity of 350MW should start its commercial operations by the end of 2006. Estlink is a direct current submarine cable interconnection project between Finland and Estonia. It connects the Nordic transmission grid to the IPS system including Russia and Baltic states in an asynchronous mode. The Estlink will benefit from an exemption to third party access until 2013. It is owned by a consortium grouping Eesti Energia (Estonia) 39,9%, Lietuvos Energija (Lithuania) 25%, VAS Latvenergo (Latvia) 25% and Finestlink (Finland) 10,1%.

It is unclear that Estlink will bring competition to Estonia as oil shale based electricity generation is cheap and prices in Finland are above the Estonian prices. Oil shale production has very high emission of CO2 so its price will increase in the future.

Other projects connecting the Baltic market to the rest of the EU are still in feasibility study stage. The transmission network operator plans the installation of another 650 MW capacity sea cable by 2010.

Gas

Functioning of the wholesale market

Law allows trade and import of gas for all market participants. Estonia however has cross-border connections only with Russia and Latvia, and the only supplier of gas is Russia.

In practice, all the gas sold in the wholesale market is imported by Eesti Gaas as there is no other wholesale. The only other importer is the chemical industry company Nitrofert but this is only for its own consumption.

Some market players however considers that potential competitive pressure from alternative Baltic suppliers – even arguably somehow theoretical - has a positive impact on Eestii Gaas supply pricing.

Functioning of the retail market

There is no independent retailers, all retail supply being done by Eesti Gaas and the distribution companies. Customers are supplied by their distributors and no switching has ever occurred.

Eesti Gaas has therefore a stable market share of 97 per cent.

The Regulator anticipates that after full opening of the market on 1st July 2007, many customers presently connected to their respective networks may wish to buy gas directly from Eesti Gaas. The emerging retail market would then be limited to customers turning towards the ultra dominant player.

Security of supply

Security of supply is a significant issue.

Between the19 January and 22 January 2006, when weather conditions were extremely cold both in Russia and Estonia, severe cuts occurred concerning all types of customers, in particular industrial customers, district heating and domestic customers.

Only Nitrofert could escape supply reduction as it imports directly its gas from Russia even in winter time, whereas Eesti Gaas covers winter Estonian gas consumption from the Latvian Inčukalns storage.

It is estimated that disturbances take place when the temperature is below 21 degrees centigrade. So as to raise security of supply, Eesti Gaas is planning to conclude special agreements to increase winter supplies from both Russia and the Inčukalns storage.

Implementation of Market Opening rules

Although the legal framework would seem to be in place, absence of any effective market opening mean that it is not implemented.

The TSO and DSO, Võrguteenus, was established just in the end of 2005 and it seems that functional unbundling is not yet in place. It is under the duty by the Regulator to establish a compliance programme as regards mainly non discrimination but this was not yet submitted buy Summer 2006.

Access tariffs are determined by the Regulator but there is no third party access taking place in practice.

Infrastructure

The network is well developed. According to Võrguteenus estimates, there shall be no transmission capacity deficiency by 2012. A precondition for capacity increase is investing into the Russian side network.

In the longer term, new pipelines through Poland or in the Baltic sea from Norway, or an LNG terminal, could provide alternative supply of gas. In the short term, the Russian gas is the only viable alternative.

Electricity and gas

Powers of regulator

The Regulator is generally considered to be independent from the Government and the industry and to have sufficient powers and resources to do the work assigned to it. Some market players however consider that human and financial resources should be strengthened. The derogation in electricity and the absence of any functioning market for gas and electricity necessarily limits its role and visibility. Strong coordination with the other Baltic regulators is absolutely needed to ensure the development of Baltic markets.

Conclusion

For electricity, considering the current high concentration and the fact that cheap oil shale generation is in the hands of the incumbent, it is not realistic to expect competition even after 2009, when 35 per cent of the market will be opened, except from Russia if Russian suppliers were allowed to enter the Estonian market. The Estonian market is in any event too small. Competition from EU countries should primarily develop by a common market of the three Baltic countries which would be facilitated by their important interconnection capacities. It is uncertain that the Estonian-Finnish sea cable that will start its commercial operation in the end of 2006 will bring much competition to Estonia because of the current low price of oil share based generation.

For gas, the appearance of an operational gas market, even at Baltic level, is unlikely in the future as all three Baltic countries are supplied with gas from a single source. Supply of gas from another source than Russian cannot be expected in the medium term. A small market for balancing gas may appear in the future.

GREECE

Main issues

- **Market opening and competition:** For electricity, households are not yet able to select their supplier. Competition in the electricity market is weak due to the fact the incumbent company retains a large share in the production side. There is no retail market in electricity. For gas, the new law is still to be implemented and therefore conclusions cannot be drawn with respect to the functioning of the gas market.

- **Regulatory authority:** the Greek regulator seems to have sufficient powers and resources.

- **Unbundling of DSOs:** the legal unbundling of DSOs will take effect on 1 July 2007 and the management and accounting unbundling of the DSO is still to take place.

- **Transparency of the market:** there is a lack of transparency in the market.

- **EU-integration**: The Greek electricity transmission network is well-integrated with Bulgaria, FYROM and Albania and there is an underwater cable with Italy. Through these interconnectors electricity trade is taking place effectively however strengthening of the interconnection capacity would be pursued. Current gas interconnection capacities are sufficient, for the existing supplier.

- **Public service obligations:** An infringement procedure for non-notification of these PSOs has been initiated by the European Commission

Overall assessment

Though the legislation transposing the Electricity Directive is in place, the market is still dominated by the Public Power Co-operation (PPC) and new entrants struggle to get a share. The prospects of developing a competitive market in Greece are little notably relating to the small size of the market. The regulated price market and the tendering procedure do not deliver sustainability, security of supply and competitiveness in the market. In addition to that the market model itself, a mandatory pool, creates obstacles to new entrants. The gas market is still embryonic to draw conclusions however the small size of the market is also a factor impeding the development of competition.

The only way forward to bring competition into the Greek market is the integration of this market into the regional one comprised of the South East Europe neighbouring countries. The Energy Community Treaty provides for the vehicle to make this happen. In this respect, it is important to develop a regional wholesale electricity market and to establish a functional and efficient Energy Community Regulatory Board to take decisions that facilitate and favour the regional perspective to the benefit of the final customer. Overall, it is significant to develop functioning regional markets in the internal energy market if the ultimate objective is to create a fully functioning energy market in the EU.

Overview on regulatory framework

The regulatory framework regarding the Electricity Market has been established by the law 2773/1999 and significantly modified by Law 3175/2003. In December 2005, the law 3426

came into force to transpose the new Electricity Directive. Market opening to all non-household customers is scheduled for July 2007 and therefore the unbundling of the Distribution System Operator is yet to take place.

Despite the legislative efforts to open up the electricity market, the market is still under strong government regulation and the incumbent electricity company, PPC, holds a dominant position. Effective unbundling of PPC carried out recently, after the Commission opened an infringement procedure to this effect.

Regarding the old Gas Directive, Greece enjoyed derogation as an emergent market. Law 3428 of December 2005 incorporates the new Gas Directive.

The law 2773/1999 established the Regulatory Agency RAE and its competences' strengthened in the recent laws on the energy market.

The Greek TSO (DESMIE) established by the Law 2773/1999 however in law 3426 PPC still retains some tasks related to transmission.

Description of the market

The starting point for the development of the electricity and gas market in Greece was two vertically integrated national monopolies for electricity and gas services, respectively; the incumbent companies being Public Power Corporation (PPC) and Public Gas Company (DEPA).

Electricity Market

Structure of the market

The Greek electricity industry is dominated by the vertically-integrated, majority state-owned Public Power Corporation (PPC). In 2005, the PPC generated and supplied 96% of electricity. PPC owns the transmission network, and owns and operates the distribution network and supply.

Independent operator capacity rose to 550 MW thermal and 405 MW renewable. In addition to that 850 MW import capacity came in through the interconnectors in 2005. The first significant independent power station was the 150 MW gas-fired Eron SA plant connected to the grid during 2004. At the end of 2005, the 400 MW Hellenic Petroleum Thessaloniki Combined Cycle Gas plant followed. The capacity installed by the private sector accounts for 10% of the total installed capacity.

Although 21 licences for private power stations were issued in 2001, most of these have not been taken up due to problems in arranging financing and obtaining specific licences. The legislation in place that gives exclusive rights to PPC to exploit and use lignite mines also acts as a disincentive to private investors.

To bring forward new capacity, the HTSO will conduct capacity auctions for new generation plant under the capacity support mechanism. The tender will be for up to 900 MW and it will be restricted to natural gas fired plants located in the south of Greece. The tender volume is equivalent to eight per cent of total mainland capacity, and would lead to a doubling of non-PPC capacity. Bidding will be allowed to those who are holding one of the licenses issued in 2001. The winning bidders will benefit from an income guarantee from the HTSO, to cover

their fixed cost where they fail to obtain at least 70 per cent of it. Amongst the generating stations that may come forward under this tender are two 400 MW CCGT plants by Enel SpA in Viotia. The gas-fired plants by Eron S.A. and Hellenic Petroleum are not built under this regime. The winner of the tender will be decided by the HTSO, RAE, and the Ministry of Development.

Motor Oil Hellas plans to construct a Combined Cycle Gas plant at their Korinthos refinery site when it is connected to gas supply.

The wholesale market is a mandatory pool where all producers and importers sell to the TSO. The dominant position of PPC and the regulated end user prices cause significant problems in essence they keep the system marginal price relatively low and therefore it's difficult to the new entrants to make bids to cover their operating and investment costs. PPC also uses importing capacity to manipulate further the prices. Bilateral contracts related to physical delivery are not allowed but generators and suppliers can conclude financial contracts. This model is claimed to be chosen so all participants have a common meeting point otherwise no control over the incumbent company's contracts would be exerted. However, the objective is to move to a competitive wholesale market over time.

The Greek Energy Regulator (RAE) faces the problem of the low system marginal price with considerable scepticism and works out market based solutions that would provide remedies to the wholesale market price manipulation by the incumbent. To this end, the Regulator envisages putting restrictions to the offers that one can make to the wholesale market, in the sort of floor on the system marginal price.

Unbundling

The Greek TSO (HTSO) is legally unbundled from the incumbent company however the shares' allocation, PPC holds 49% of the HTSO, and the fact that more than half of the HTSO personnel of the HTSO is seconded from PPC raise concerns regarding the independence of the TSO. The HTSO is planning new recruitments and the change of balance with respect to the staff relation with PPC is expected over the next year. In addition to that, a Ministerial decree is due to be issued so to turn secondments into permanent posts of the HTSO for those wishing to stay. There are concerns about the effective functional and management unbundling of the HTSO, although the Commission received no complaint against the impartiality of the HTSO.

Gas market

The Greek gas industry is still in an early stage of development, and the Greek state is heavily involved in the industry through direct and indirect ownership. Gas is a relatively new fuel in Greece and has to compete against lignite and fuel oil in its primary applications. It is expected that all new fossil power generation capacity to be added in Greece is going to be gas-fired.

DEPA is owned to 65 per cent by the Greek state and to 35 per cent by Hellenic Petroleum, which in turn is owned to 35 per cent by the Greek state. The PPC has an option to purchase 30 per cent of the shares of DEPA from the Greek government. There is currently no indication on whether the PPC will exercise this option.

During 2006, DEPA's upstream operations will split out a company responsible for the operation and development of the high-pressure network called DESFA, of which DEPA will continue to own 100 per cent, in accordance with EU market directives. The new company will become the owner of the Greek high-pressure gas transmission system, and will be responsible for its future development and operation, including the provision of access to the gas network on the basis of published third-party access tariffs under regulation by the RAE and the Ministry of Development.

Gazprom has set up the joint venture Prometheus Gas S.A. for the direct sale of gas in the Greek market. Due to the delay in publishing network access tariffs following changes to regulation in 2003, no gas sales have been conducted by Prometheus Gas as yet.

Private companies have the right to construct and operate upstream natural gas infrastructure such as LNG terminals or high-pressure pipelines, but none has been constructed. Construction of low-pressure pipelines has been done by private companies on a contractor basis.

Import contracts have been signed with the Russian Gazexport, theAlgerian Sonatrach, and the Turkish Botas. Contract volumes are somewhat flexible, on a take-or-pay basis for a volume range. The contract with Russian Gazexport is running to 2016 with an option to renew it for 10 years, and covers up to 2.8 bcm per year at an 80 per cent load-factor, while the contract with Algerian Sonatrach runs to 2020 and covers 0.51 to 0.68 bcm per year. The Botas contract will run for 15 years from the opening of the pipeline, and covers imports from 0.25 to 0.75 bcm per year. In total this gives DEPA a contracted volume of 2.75 to 3.48 bcm with current capacity of 4.3 bcm at the moment, and will give it an import volume of 3 to 5.23 bcm per year once the Botas contract becomes valid.

Wholesale market

There is no wholesale market at this time.

Downstream

The Greek downstream market for customers below 10 mcm annual demand is serviced by regional monopolies called EPAs, whose prices are directly controlled by the Regulator. They cover the areas of the Attiki peninsula, Thessaloniki, and Thessaly. Following restructuring of DEPA under Law 3428/2005, they will be 51 per cent owned by EDA, a subsidiary of DEPA which owns the fixed assets with which the EPAs operate. The remaining 49 per cent are owned by international companies. EPA Attiki is partially owned by a consortium of Cinergy and Shell Gas, and the other two EPAs are partially owned by Italgas. EDA has to pay 10 per cent of its dividends to the local authorities covering the regions in which it owns gas distribution assets.

EPAs have the exclusive right to supply customers with a demand below 10 mcm per year and located within their concession areas for a period of 30 years from the start of their license in 2002. The government is considering the establishment of three new EPAs and is in the process of requesting a derogation from Article 28 of the Gas Directive.

Conclusions

Most market participants consider that the Greek market for both electricity and gas has shortcomings.

With respect to electricity, small generators are struggling to get a market share out of the PPC market dominance.

To make the electricity market functioning, a series of actions have to be taken related to:

Strengthening of unbundling;

Establishment of a competitive wholesale market;

Removing of barriers to new entrants related to the incumbent company dominant position and low end users prices;

Monitoring of the market so to avoid abuse of dominant position;

Strengthening of the interconnecting capacity;

Effective unbundling of the distribution branch of PPC

With regards to the natural gas market, it's early to draw conclusions or make recommendations since until recently Greece derogated from the provisions of the Gas Directive because it qualified as an emergent market. The legislation on natural gas is recent and not fully deployed and therefore it is early to make assessments on the operation of the gas market.

SPAIN

Main issues

Market opening and competition: The Directives have not been transposed and a record four infringement procedures are ongoing. For electricity, the regulatory framework generally does not allow for effective competition to develop. It is also highly instable and does not provide predictability. Regulated supply tariffs prevent new entry to the benefit of incumbents. They are detrimental to investments, which is especially worrying as lack of generation capacities is being increasingly evidenced. As a consequence, the market is almost fully controlled by the incumbents representing about 90% of supply in 2005. For gas, the regulatory framework has significantly improved over the last few years. The strongly growing industrial market, dominated by LNG, ensures that competition is effective as regards supply to the biggest customers. Protected by regulated supply tariffs, the incumbent remains strongly dominant as regards non industrial customers with 73% of the market in number of customers at the end of 2005. Strong lack of structural flexibility plays against smaller players.

Regulatory authorities: The Regulator is in place but is considered to lack powers and independence. It has no competence for cross-border issues.

Unbundling: At transmission level, ownership unbundling is in place but not complete as the two TSOs are involved in energy trading, which raises issues of conflict of interests. At distribution level, functional unbundling has not been implemented, which can facilitate discriminatory behaviours. The electricity TSO owns transmission assets.

Transparency: The situation has improved in 2005 as regards transparency in the gas sector, with new regulation being introduced. Increased transparency is needed in the electricity sector, especially as regards price formation in the electricity exchange.

EU integration: Spain, and the Iberian Peninsula generally, dramatically lacks interconnections with the rest of the EC, with the consequence that the Iberian market is practically isolated. This not only prevents market integration but also any significant competitive pressures, especially from France.

Overview on regulatory framework

Spain had implemented important provisions of the Directives before their adoption. Full market opening, including for domestic customers, and regulated third party access, including to gas storages, are implemented since January 2003. Ownership unbundling, at least partially, of gas and electricity transmission system operators was implemented; as well, in substance, as legal and accounting unbundling of distribution system operators. An energy regulator was also created: the Comisión Nacional de Energía (CNE).

However, important elements of the Directives have not been transposed, and the adoption of the implementing legislation has constantly been delayed since the last two years. A draft implementing law was adopted by the Government on September 2006 and is before the Parliament in the autumn 2006. Its adoption is unlikely to take place before spring 2007. Spain is therefore, and the only Member State with Luxembourg, subject to general infringement procedure for non communication of transposition measures for both the gas and

electricity Directives, that are now before the European Court of Justice (on 16 November 2006, Spain was condemned by the Court for non transposition of the Gas Directive, the decision on the Electricity Directive is to follow).

Additionally, following formal complaints, two reasoned opinions were sent in December 2006 as part of the Commission's infringement package. This in particular concerns the existence of a "tariff market" for supply of electricity, which is below market price and prevents non incumbents from entering the Spanish market, and the absence or incompleteness of functional and accounting unbundling for gas.

Because of the ongoing general infringement procedures, the Commission only acted on formal complaints but other infringements exist. This concerns in particular functional unbundling of DSOs; formal designation of the ministry, which still decides on access tariffs, as a regulatory authority; full compliance with consumer protection rules; or implementation of labeling of the mode of production of electricity. Regarding unbundling of transmission operators, ownership unbundling is actually incomplete as Enagas is buying and selling on the regulated market, and Red Electrica still imports electricity which it sells to the Pool. Legal, functional and accounting unbundling is therefore required at transmission level.

Finally, the exclusive right of the owners of the transmission and distribution networks to supply the "tariff market" is also not justified under the Directives as a public service obligation. It is discriminatory and, with regulated tariffs below market prices, it prevents equality of access to the Spanish gas and electricity supply markets for newcomers.

DESCRIPTION OF THE MARKET

Electricity

Because of the limited interconnection capacities with France and Portugal, Spain can be considered as a market on its own. The Spanish generation and supply markets are dominated by the four incumbent generators and distributors, Endesa, Iberdrola, Hidrocantabrico and Union Fenosa.

The transmission system operator, Red Electrica has been gradually acquiring, since 2002, the entire transmission network, which it now practically owns in its entirety. Its independence in terms of ownership is guaranteed by the law. 325 distribution companies are registered, the main ones being by far the four incumbent suppliers above.

The Spanish electricity exchange, the Pool, is operated by OMEL.

The Iberian Electricity Market, MIBEL, started operating on 1 July 2006. Initially set to start on January 2003 but postponed, it was re launched following an agreement between Spain and Portugal on October 2004 but since then again delayed for political, regulatory and technical issues. It aims at creating an integrated electricity wholesale market with Portugal, notably by creating a single market operator for the wholesale Iberian pool market (at the beginning the Spanish market operator is to be responsible for the spot market and the Portuguese market operator for the forward market). Despite the start of MIBEL, it is too soon to consider that a unified Iberian market already exists.

Since the summer of 2006, Spain is implementing an ambitious programme of replacement of its 22 million old electricity meters by electronic ones.

Gas

Accounting in 2005 for 20% of Spain's primary energy structure, Spain gas market is relatively recent and strongly growing. Overall consumption of gas was multiplied by 2 from 2000 to 2005 with an 18% growth in 2005. This growth is boosted by increased combined cycles generation capacities representing 42% of the overall consumption in 2005. 44% of gas imported came from Algeria in 2005.

Another important element of the Spanish gas market, linked with its recent development, is the importance of LNG, which accounted in 2005 for an EU record of 65% of all gas imported in Spain.

These features, strongly growing but somehow immature market, and dominated by LNG supply, decisively influence its functioning, especially in terms of development of competition and market opening. Strong growth facilitates the development of competition from new entrants; strong proportion of LNG supply increases the flexibility of the gas system, the possibility of arbitrage and the diversification of supply origins.

The industry has been able to meet the high demand increase with important investments being undertaken.

Issues

3.1 Regulatory framework, market opening and competition

3.1.1 Electricity

Regulatory Framework

The Spanish electricity regulatory framework, combined with the structure if the electricity industry, is widely seen as unable to allow for a correct functioning of a competitive market. It has been regarded in recent years as heavily unstable, providing no predictability to both industry and consumers, with policy decisions being determined by short-term political considerations rather than long term energy policy perspective. A way or another, sometimes in a contradicting mode, it is heavily criticized by all market players.

In addition to the regulated tariffs, competition and price formation are in particular affected by aid schemes to incumbent generators: the – recently suppressed (see below) - stranded cost recovery mechanism, called Competition Transition Costs (CTCs); and the mechanism of capacity payments paid to generators as a reward for their contribution to the reliability of the power system.

In practice, there is a general view that such schemes promote the quasi exclusive use of the Pool to the detriment of bilateral contracts (the capacity payment being paid for electricity supplied to the Pool) and heavily distort price formation on the Pool.

Spain is therefore in the process of reforming the regulatory framework of its wholesale electricity market, which goes beyond the implementation of the Directive. A White Book on this reform was issued in July 2005. It would however seem that its strong recommendations for heavy reforms will only be partially followed. The process also seems to be considerably delayed, arguably in part because of the ongoing restructuring process affecting the Spanish

energy industry. A significant early step of the reform was the suppression of the CTCs in June 2006.

New entrance and Competition

As a consequence of the regulatory framework described above, the market is almost fully controlled by the incumbent generation and distribution companies which accounted for about 90% of supply in 2005. The only exception is also a Spanish incumbent but from the gas sector, Gas Natural, which operates generation capacities since 2002 and is strongly growing with market shares of 7% in the supply market in 2005.

Apart from Gas Natural, generally speaking, it would seem almost impossible to enter the Spanish electricity market as a newcomer without buying existing incumbents: the Portuguese incumbent EDP has penetrated the market through the acquisition of Hidrocantabrico (5.5% of supply), and ENEL through the acquisition of the small distributor Viesgo (1.5% of supply). No other market player has market shares above 1%. With the exception of Gas Natural, new entrants represent overall less than 3% of the market.

In practice, competition is severely restricted by the dominant duopoly of Endesa and Iberdrola, accounting for 70% of supply. This dominance enables abusive conducts, a number of them being currently investigated by the Spanish competition authorities. Price manipulation is also made possible, especially on the Pool; its price being highly volatile and widely seen as not reflecting costs.

This excessively concentrated market structure would be strongly aggravated by a merger between Endesa and Gas Natural, as, as indicated above, GN, in addition to being the dominant gas supplier, is the only significant new competitive force on the Spanish electricity market. GN's bid over Endesa was however approved by the Spanish government in February 2006 contrary to the opinion of the Spanish competition tribunal.

Investment

These features are aggravated by the lack of generation capacities.

In a context of increased demand (with an average increase of 5% in recent years), Spain's generation capacity is under pressure. In 2005 and early 2006, real capacity margins decreased to -4%, despite an increase in generation capacity of +8%. Industrial buyers complain that significant power cut takes place for interruptible customers.

Regulated tariffs below cost are especially dangerous in this regard as they are unable to provide for the right investment signals (see 3.1.3 below).

3.1.2 Gas

Development of the regulatory framework

In the first years of market opening following the Hydrocarbons Act of 1998, new entrants had severe difficulty in terms of network access. High barriers to entry existed, due to administrative and regulatory difficulties arising from loopholes in the regulatory framework. On the impulsion of the Regulator, significant progresses have been achieved. Market players now consider that access to the grid and switching has considerably improved since, in particular, the full application of the Royal Decree 1434/2002 in 2004, followed, in 2005,

with improvement concerning access to information and transparency, as well as balancing rules with the adoption of a Network Code. Some entry barriers however remain and more detailed regulation is needed.

Lack of flexibility

Lack of structural flexibility is a major issue. Storage capacities are very insufficient mainly as regards withdrawal capacity which makes possible the use of storage only for seasonal variations. Access to storage is seen as difficult by some market players but this could be improved by the implementation of an auction system in 2006. Lack of storage also raises security of supply issues.

LNG supply enables some degree of flexibility. Several players however highlight some difficulties in accessing LNG terminals for smaller players, with the results that ships have to wait before being unloaded, to the advantage of the incumbent dealing with more important quantities.

Competition on the gas market for smaller customers

As regards industrial customers, especially generators, as a result of the growing demand, mainly from combined cycle generation, the competition have been intense in the past couple of years. The gas release program in 2001 of one fourth of the gas coming from the main Algerian contract, assigned to traders for supply in the free market, served as a catalyser in this regard. Overall, the market share of the incumbent company Gas Natural has reduced from 100% to 48% from 2000 to 2005. New entrants include the incumbent electricity companies (Endesa, Union Fenosa, Iberdrola), which facilitate the development of dual gas and electricity offers, and major foreign companies such as BP, Shell and GDF.

If tough competition seems to prevail on the Spanish gas market for big and industrial, customers, the situation is far less satisfactory on the retail market. In terms of number of customers, GN remains strongly dominant with 73% of the market in the 4th quarter 2005, which shows that competition is only fully effective as regards big customers. This is partly due to regulated tariffs (see 3.1.3 below).

3.1.3 Regulated supply tariffs

In Spain, a *"tariff market"* exists in parallel to the open market: eligible customers (i.e. all the domestic and non domestic customers in Spain) have to opt out from the regulated supply market ("tariff market") to be able to choose their suppliers. The incumbent companies, owning the regional distribution networks, have the exclusive right to supply customers that have not opted out. The supply tariff is decided by the Government.

These regulated supply tariffs prevent market opening for gas and electricity and any effective competition from developing in many segments, and this, to the exclusive benefit of the incumbents owning the distribution networks.

Electricity

The supply tariff is well below the market price on the liberalised market, and eligible customers therefore remain within the regulated market. The consequence is that, at the end of 2005, 80% of the non domestic customers and 92% of the domestic customers were still in the tariff market to the exclusive benefit of incumbents. With the price difference increasing

considerably in 2005 and 2006 as a result of the increase of the market price, eligible customers actually now even return to the "tariff market".

In addition, the incumbent companies are financially compensated by the Spanish state for the deficit caused by the low level of tariffs. Through access tariffs, this financing partly rests on customers having opted for the free market.

Within the framework of the public service obligations provided for under the Directives, the right of Member States to regulate the price of electricity supply, so as to ensure access to energy for vulnerable customers and universal electricity service at a reasonable price for the smaller customers, is fully recognised provided these regulations are not discriminatory and guarantee equality of access for EU electricity companies to national consumers.

The current scheme in Spain prevents equality of access to the Spanish electricity supply market for newcomers. It has a general character, is not responsive to changes in market conditions, is non transparent, and is not targeted on vulnerable customers. The exclusive right to supply in the regulated market is granted in a discriminatory manner to incumbent companies, absent any tender process. This scheme could be incompatible with Directive 2003/54. A number of formal complaints have been received by the Commission, which subsequently started an infringement procedure as regards the application of the regulated tariffs, at this stage to non domestic customers, and the compensation mechanism.

Gas

Overall, the impact of the tariff market for gas is far less negative than for electricity with the deregulated market representing 84% of total consumption in 2005.

In reality, if the impact of regulated tariffs is less strong as regards big industrial customers (in particular because of the fast growing demand and the possibility of arbitrage facilitated by the LNG supply), regulated tariffs heavily prevent competition as regards the non industrial customers. This is evidenced by data on number of customers (not overall volumes): 51% of the non domestic customers and 70% of the domestic customers were still in, or had returned to, the tariff market under exclusive supply by incumbents at the end of 2005. It should be added that the differences in regulated tariffs for different categories of customers may imply some cross subsidisation.

From 2004, the higher price of gas was not reflected in tariffs, which are based on long term contracts from Algeria. This continued in 2005 despite a tariff increased which enable some competition with the regulated tariff.

It is planned that regulated tariffs will be terminated for bigger customers by the end of 2006, and for all non domestic customers in January 2008. No suppression is planned for the non domestic customers which will raise the issue of their compatibility with the Directive as from 1st July 2007.

3.2 Network operators and unbundling

Electricity

No electricity company can be part of the capital of Red Electrica, which is therefore often presented as ownership unbundled. Ownership unbundling is, however, incomplete as Red

Electrica buys from EDF under long term contracts and sells to the Spanish Pool, allegedly with no commercial margin.

This means that, as regards these important contracts, neither legal nor functional or accounting unbundling is implemented. Some market players have complained in this regards that the contracts with EDF benefit *de facto* from priority allocation of capacities at the much congested interconnector between France and Spain. An agreement with the French TSO, RTE, as to non discriminatory allocation of capacity in compliance with the Directive could only be reached in June 2006. Since then, an auction system is in place but Red Electrica can directly benefit from high bid it is making to itself.

At distribution level, legal unbundling has been implemented, in advance of the July 2007 final deadline set by the Directive. Functional unbundling is however not implemented which facilitates discriminatory behaviours. In addition, legal unbundling is actually incomplete as electricity companies owning and operating the distribution networks buy and sell electricity in the regulated market.

Gas

At transmission level, the impartiality of the transmission system operator seemed to have considerably improved since ownership unbundling was implemented in Spain, with the incumbent Gas Natural divesting its controlling interest in Enagas.

The complete impartiality of Enagas as regards the smaller players is however still questioned by some market players, in particular as regards access to LNG terminals. The fact that a very important trading of gas takes place between Enagas and Gas Natural for supply to the tariff market also raises strong issues of compatibility with the Directive and of conflict of interest, preventing *de facto* independence between the two companies.

Some market players also raise the issue of Enagas advantaging, through network investment decisions, its own LNG terminals as regards the LNG terminals of its competitors. The same applies to the development of the network in general. Fears were in particular expressed that investment decisions by Enagas might not fully take into account the need to properly connect the Medgas pipeline from Algeria, as Enagas is not a shareholder of Medgas.

Generally, the regulatory framework should be reinforced and clarified in line with the Directive to ensure the existence of a fully impartial TSO with clear competences. Simpler and more transparent rules for network access should continue to be actively promoted by the Government and the Regulator.

At distribution level, the absence of functional unbundling makes it possible for the incumbent Gas Natural to take advantage of its role of distribution system operator. There are claims in this regards that it promotes its supply activities through meter reading. Timely access to information for competitors is also seen as something that could be improved.

3.3 Powers of the regulator

The independence of the CNE from the government could be strengthened. Currently, the President and the eight members of the Board of Commissioners are appointed by the Government through a Royal Decree adopted on the proposal of the Ministry of Industry, Trade and Tourism. In addition, the President and the members of the Board of

Commissioners can be re-appointed. This legal framework cannot guarantee independence from the Government. A former Member of Parliament of the current majority was appointed President of the CNE in 2005.

The CNE's powers to regulate the market should also be strengthened. Currently, the CNE is lacking the key competence of EU energy regulators which is the decision over access tariff. The CNE submits a report to the Ministry but the decision is taken by the Ministry, possibly without any consideration for the opinion of the CNE, and even without having to justify its own decision or the fact that it departs from the CNE's opinion. The decision making process of the Ministry is in this regards being described by many market players as totally opaque.

Following the take-over bid of E.ON over Endesa, approved by the European Commission on 25 April 2006 under EC Merger Control, the Government adopted an emergency Decree granting the CNE with extra competence enabling it to control E.ON's acquisition of Endesa. That led the CNE to subject E.ON's acquisition of Endesa to 19 conditions. The grant of these powers to the CNE and their use against E.ON's entry into the Spanish market, constitute a severe infringement of both EC free movement of capital rules and exclusive Commission's merger control competence. Two infringement procedures were ongoing in this regard in the autumn 2006.

3.4 Transparency

For gas, it seems that the situation has improved in 2005 with new regulation being introduced. Lack of transparency as regards the decision process for access tariff is still seen as a problem by some market players. Arguably, transfer of the competence from the Government to the CNE in this regards could ensure more transparency.

Increased transparency is strongly needed in the electricity sector, especially as regards price formation in the Pool.

3.5 EC Market Integration

Spain, and the Iberian Peninsula generally, dramatically lacks cross-border interconnections, with the consequence that the Iberian market is practically isolated from the rest of Europe. This prevents market integration and significant competitive pressures from lower prices from France.

For electricity, interconnections with France is one of the lowest in Europe, representing less than 3% of the wholesale market and are heavily congested. Industrial buyers strongly complain in this regard about the higher price of electricity in Spain than in France.

For gas, there is also a crucial need for more developed interconnection capacities, especially from France but also North Africa. The situation will improve with the construction of a pipeline linking directly Spain to Algeria, Medgas, which should be completed by 2009.

Conclusion

The Spanish market still has a long way to go towards a fully competitive status. Late transposition of the Directives together with low regulated tariffs seem to have been detrimental to investment by existing or potential new entrants whereas Spain should, under normal conditions, be an extremely attractive market given its growing energy demand.

Further uncertainty arose on the market following the takeover offers from Gas Natural and EON over Endesa. The increase of the regulator's powers and the conditions imposed by the CNE on EON to go ahead with its offer on Endesa have both been objected by the Commission.

An increase in interconnection capacity with France and Portugal would certainly help increasing competition.

FRANCE

Main issues

Market opening and competition: L'ouverture des marchés reste largement théorique en France. Pour l'électricité, en juillet 2006, les nouveaux entrants concurrençant EDF ne fournissaient que 4,8% des sites éligibles. Hors gros consommateurs, sur le segment des PME, la pénétration des nouveaux entrants est quasi nulle avec 0,6% du marché. La pénétration étrangère, même incluant les fournisseurs français dont l'actionnaire principal est un fournisseur étranger, ne représente que 0,03% pour les petits et moyens consommateurs. Pour le gaz, les fournisseurs historiques GDF et Total contrôlent 95% des importations par des contrats de long terme. Au 1er juin 2006, les nouveaux entrants ne fournissaient que 4,2% des sites éligibles. De façon générale, 50% des consommateurs éligibles ignorent qu'ils peuvent changer de fournisseur. Cette fermeture est notamment due au maintien, en violation des Directives, de tarifs de vente régulés significativement inférieurs au prix du marché et empêchant l'accès au marché des nouveaux entrants au bénéfice des opérateurs historiques.

Regulatory authorities: Les pouvoirs du régulateur sont insuffisants. Il devrait décider seul des tarifs d'accès. Dénué de pouvoirs en matière de surveillance des marchés, il n'a pas en outre les moyens de veiller au développement d'une concurrence effective sur le marché. Pour éviter les dérives en cours, seul, enfin, l'attribution d'une compétence sur les tarifs de fourniture est susceptible d'éviter des interférences politiques. Le régulateur n'a pas de compétence pour les questions transfrontalières.

Unbundling: La séparation des opérateurs de réseau demeure insuffisante. Les codes de bonne conduite ne permettent pas d'éviter les discriminations et demeurent largement méconnus des utilisateurs des réseaux. L'indépendance des dirigeants des gestionnaires de réseaux n'est en outre pas garantie. Enfin, la confusion d'image entretenue par les opérateurs historiques ente les activités de fourniture et de transport les fait bénéficier d'un avantage concurrentiel indu.

Transparency: L'absence d'une véritable ouverture des marchés se manifeste par une transparence insuffisante. Les nouveaux entrants restent discriminés quant à l'accès à l'information auprès des gestionnaires de réseau. Au niveau de la génération, seul EDF dispose d'informations sur la disponibilité de l'essentiel du parc de production.

EU integration: Les capacités d'interconnexion électriques avec les pays voisins restent bien trop insuffisantes pour que se développe une concurrence transfrontalière importante.

Aperçu du cadre reglementaire

La France a mis en oeuvre les secondes directives gaz et électricité par la loi du 9 août 2004. Le marché est ouvert depuis cette date pour les seuls clients non domestiques. Une seconde loi de transposition, adoptée en novembre 2006, prévoit notamment l'ouverture des marchés aux clients domestiques au 1er juillet 2007, la séparation juridique des gestionnaires de réseaux de distribution desservant plus de 100.000 clients par leur filialisation, une aggravation du système des tarifs régulés, un certain renforcement des pouvoirs du régulateur, et des mesures en faveur de la protection des consommateurs.

Mise en place en 2000, la Commission de régulation de l'énergie (CRE) est une autorité administrative indépendante chargée de veiller au bon fonctionnement des marchés de l'électricité et du gaz. La CRE partage le rôle de régulateur des marchés de l'électricité et du gaz avec le Gouvernement, qui a un droit de véto quant aux tarifs d'utilisation des réseaux fixés par la CRE, ainsi que le Conseil de la concurrence et l'Autorité des marchés financiers, respectivement dans les domaines de la concurrence et des marchés financiers.

Les marchés français du gaz et de l'électricité sont ultra dominés par les opérateurs historiques Gaz de France (GDF) et Electricité de France (EDF), qui contrôlent les marchés de la production/importation et de la vente, ainsi que la presque totalité des réseaux de transmission et de distribution. La séparation juridique a été mise en œuvre au niveau des réseaux de transmission mais non encore des réseaux de distribution.

Historiquement, les prix de l'électricité et du gaz étaient soumis à des tarifs réglementés par la puissance publique. L'ouverture du marché s'est traduit par le droit octroyé aux consommateurs devenus éligibles de quitter leur contrat sous tarif réglementé. Ceux-ci doivent donc, dans un premier temps, quitter le marché régulé, afin, dans un second temps, de pouvoir choisir librement leur fournisseur sur le marché ouvert à prix libre. EDF et GDF (ainsi que quelques distributeurs locaux) ont un monopole de fourniture du marché régulé.

La Commission européenne a envoyé à la France, en avril 2006, deux lettres de mise en demeure relatives à des infractions aux directives marché intérieur du gaz et de l'électricité, portant notamment sur le système de tarifs régulés de fourniture de gaz et d'électricité, qui empêchent l'arrivée de nouveaux entrants sur les marchés, ainsi qu'une insuffisante séparation fonctionnelle des gestionnaires de réseaux de gaz et d'électricité, ce qui ne permet pas de garantir leur indépendance.

En février 2006, Suez et GDF ont annoncé un projet de fusion entre les deux groupes qui a été approuvé par la Commission le 14 novembre et qui devrait être finalisé fin 2006.

Description of the market

Electricité

Contrôlée par l'Etat français, EDF domine le marché français, représentant une consommation de 480 TWh en 2005, avec une part de marché d'environ 87% des capacités de génération, ce qui fait de la France un des marchés les plus concentrés en Europe. EdF a été transformée en société anonyme en 2004, la participation de l'Etat devant selon la loi rester supérieure à 70%.

Deux autres acteurs ont une présence significative au niveau de la production: Electrabel-Suez et la SNET (groupe Espagnol Endesa) avec respectivement 4% et 2% de la puissance installée. Au total 58 fournisseurs, dont Total et GDF, détiennent des capacités de génération.

La filiale d'EDF créée en septembre 2005, RTE, est l'unique gestionnaire du réseau de transport.

EDF gère un réseau de distribution représentant 95% de la distribution d'électricité, 150 entreprises locales de distribution assurant la gestion du réseau pour les 5% restant.

EDF exporte vers les pays voisins, les interconnexions étant souvent congestionnés. Le Régulateur français a imposé au 1er décembre 2005 la suppression de la priorité d'accès des contrats historiques aux interconnecteurs avec la Belgique, l'Allemagne, l'Italie et l'Espagne

(mais non avec la Suisse). Depuis le 1er janvier 2006, l'allocation des capacités d'interconnexion avec les pays communautaires voisins fait l'objet d'enchères explicites.

L'essentiel des transactions sur le marché de gros français sont effectués *over-the-counter* avec un volume de livraison physiques nettes de 200TWh en 2005, en hausse de 27% par rapport à 2004.

La bourse française de l'électricité Powernext a traité en 2005 20 TWh en *day*-ahead, soit une hausse de 39% par rapport à 2004. Depuis 2004, il existe un marché des volumes *futures* qui est en progression régulière avec 62 Twh négociés en 2005. La bourse allemande EEX propose depuis l'été 2005 des produits à livraison physique en France représentant 1,6 TWh pour les quatre derniers mois de 2005. Le 21 novembre 2006, le couplage des marchés belges, français et néerlandais a été mis en place.

Le marché de gros français peut être considéré de dimension nationale. Les prix de gros en France sont cependant assez fortement corrélés aux prix de gros allemands et britanniques sur l'EEX. Les prix spots en base cotés au deuxième trimestre 2006 sont en moyenne de 37,15 euro/MWh, soit en baisse de 9% par rapport au second trimestre 2005.

Les exportations françaises sont considérables, représentant 91 TWh en 2005, dont 50% à destination de la Suisse et de l'Italie. Les importations sont également importantes avec 32 TWh dont les deux tiers en provenance d'Allemagne.

Les sept entreprises les plus consommatrices d'électricité en France ont crée en mai 2006 un Consortium pour acheter en commun leur électricité par des contrats de long terme. Ce Consortium est susceptible de soulever des problèmes de concurrence, notamment si une grande proportion des contrats était passée avec EDF pour de longues durées, fermant ainsi le marché aux nouveaux entrants.

Des dispositions sociales en vue de protéger les clients les plus vulnérables ont été adoptées. Une partie du coût supporté par les fournisseurs à ce titre fait l'objet d'une compensation par la Contribution au Service Public de l'électricité.

Gaz

La consommation de gaz en France s'élève en 2005, à 49 Gm3. Le marché éligible représente 73% soit une consommation annuelle de 380 TWh de gaz.

Les importations n'ont cessé de croître depuis les années 70 pour s'élever à 38,79 Mtep en 2004. Les principaux fournisseurs de gaz naturel en France sont la Norvège (27%), la Russie (21%), les Pays-Bas (20%) et l'Algérie (12%). Les capacités d'importation françaises sont en cours d'extension en raison notamment de l'augmentation actuelle des capacités du point d'entrée d'Obergailbach, et de l'implantation future d'un nouveau terminal méthanier à Fos Cavaou.

La France compte cinq points d'entrée de gaz sur le territoire : la frontière avec la Belgique, le gazoduc en provenance de la Norvège, la frontière avec l'Allemagne, et les terminaux LNG de Montoir dans l'ouest et de Fos-Sur-Mer dans le sud. Il existe par ailleurs deux points de sortie sur le territoire français à la frontière avec l'Espagne et avec la Suisse.

Il y a deux gestionnaires de réseaux de transport, filiales à 100% de, respectivement, GDF et Total : GDF Réseau transport opère environ 88 % du réseau de transport français, et Total Infrastructures Gaz France gère le réseau dans le sud-ouest du pays.

Il existe 22 gestionnaires de réseaux de distribution, dont Gaz de France Réseau Distribution, direction séparée de manière comptable et fonctionnelle au sein de GDF, qui opère environ 96 % du réseau de distribution français, et 21 Entreprises locales de distribution dont les plus importantes sont contrôlées par les municipalités.

L'activité des expéditeurs sur le réseau français se développe, avec, au 1er mai 2006, 21 expéditeurs actifs sur le réseau de GRTgaz et 8 sur celui de TIGF.

Principaux points

Tarifs régulés

Le niveau anormalement bas des tarifs régulés, notamment pour certaines catégories de consommateurs, constitue un obstacle à l'arrivée de nouveaux entrants au profit d'EDF et de GDF. Il représente en outre un frein à l'investissement dans de nouvelles capacités de production électriques.

Dans le cadre des obligations de service public prévues par les Directives, le droit des Etats Membres de mettre en place des réglementations tarifaires, pour assurer l'accès au gaz et l'électricité des clients vulnérables et le service universel d'électricité à prix raisonnable pour les plus petits consommateurs, est pleinement reconnue, pour autant que ces réglementations soient non discriminatoires et garantissent aux entreprises d'électricité et de gaz de l'Union européenne un égal accès aux consommateurs nationaux. Les règles françaises ne semblent cependant pas pouvoir être justifiées en tant qu'obligation de service public dès lors que l'obligation de fourniture à prix régulé ne fait pas l'objet d'une procédure d'appel d'offres, concerne tous les consommateurs éligibles et n'est pas limitée à des circonstances particulières, et que, enfin, le niveau du prix régulé n'est pas lié au prix du marché.

On notera notamment à cet égard le fait que, le contrat de service public entre EDF et l'Etat, signé en octobre 2005, prévoit que la hausse des tarifs aux clients résidentiels ne sera pas supérieure à l'inflation pendant les cinq premières années. L'absence de hausse des tarifs, de juillet 2003 à l'été 2006 amène même à mettre en doute l'adéquation des tarifs avec les coûts, notamment pour certains segments. Des subventions croisées entre les tarifs sont en outre créées créant de graves distorsions de concurrence.

Pour le gaz, l'évolution trimestrielle des tarifs a été supprimée par un arrêté du 28 avril 2006 pour GDF, aucune fréquence d'évolution des tarifs n'étant fixée. Outre les effet négatifs sur l'ouverture des marchés, le gel de l'évolution des tarifs entraine une amélioration artificielle de la compétitivité du gaz par rapport au fioul domestique.

En conséquence, pour l'électricité, si une certaine concurrence s'exerce envers les clients éligibles, la grande majorité des sites reste soumise aux tarifs réglementés. Au 1er juillet 2006, seulement 13,8% des sites éligibles sont ainsi sortis du tarif régulé et sont soumis au prix du marché et à la concurrence. Pour le gaz, le marché effectivement ouvert est également considérablement limité. Au 1er juillet 2006, seulement 11,3% des sites éligibles sont sortis du tarif régulé et sont soumis au prix du marché et à la concurrence.

Le maintien d'un régime régulé par défaut nuit en outre à la connaissance de l'ouverture des marchés: 50% des éligibles ignorent qu'ils peuvent changer de fournisseur.

Les nouveaux entrants, mais aussi les opérateurs historiques, dénoncent ce système. Les gros consommateurs sont généralement en faveur du maintien d'un tarif régulé bien que certains mettent en cause leur volatilité et insistent sur le besoin essentiel de stabilité.

La seconde loi de transposition, adoptée en novembre 2006, permet le retour des plus gros consommateurs d'électricité à un tarif régulé, préalablement interdit, supprimant ainsi la seule portion du marché français où une concurrence effective pouvait s'exercer. La législation française tourne ainsi délibérément le dos à l'ouverture des marchés prévue par les directives en violation des obligations communautaires de la France.

Ouverture du marché et concurrence

Electricité

Au 1er juin 2006, soit deux ans après l'ouverture du marché aux clients non domestiques, les nouveaux entrants concurrençant EDF ne fournissent que 4,8% des sites éligibles représentant 14,8% du volume de consommation éligible. Sur le segment des PME (consommation entre 250 kW et 36 kVA), la pénétration des nouveaux entrants est quasi nulle avec 0,6% du marché.

L'ouverture européenne est très faible. La pénétration étrangère, même incluant les fournisseurs français dont l'actionnaire principal est un fournisseur étranger, ne représente que 6% du marché éligible. Avec seulement 0,05% en nombre de sites fournis, cette faible pénétration ne concerne en réalité que les plus grands consommateurs avec 3% des sites dont la puissance souscrite est supérieure à 250 kW, mais reste quasi inexistante pour les petits et moyens consommateurs (0,03%).

Etant donné la situation ultra dominante de EDF et son accès à une production nucléaire déjà en grande partie amortie et à bas coût, les *virtual power plant* (VPP), consenties par EDF dans le cadre de la procédure communautaire de contrôle des concentrations relative sa prise de participation dans l'électricien allemand EnBW constituent un élément indispensable de l'ouverture à la concurrence du marché français. En 2005, ces VPP ont ainsi représenté 56% des approvisionnements des opérateurs alternatifs. Si elles apportent une certaine liquidité au marché, ces VPP restent cependant tout à fait insuffisantes pour permettre le développement d'une concurrence réellement significative, d'autant qu'elles sont allouées aux prix du marché très au dessus des tarifs réglementés.

Un programme régulé de mise à disposition d'électricité par EDF est nécessaire au développement de la concurrence. Il résulte d'une consultation publique effectuée par la CRE que la quasi-totalité des acteurs partagent cette opinion.

Dans un contexte de hausse des prix, l'insuffisante liquidité du marché entraîne une volatilité importante du prix de l'électricité sur les marchés.

Gaz

Le marché du gaz français est caractérisé par des barrières à l'entrée élevées qui rendent l'accès au marché très difficile pour de nouveaux entrants. Il repose ainsi notamment, pour

l'essentiel de ses approvisionnements, sur des contrats à long terme détenues par les fournisseurs historiques, GDF et Total contrôlant 95% des importations.

Au 1er juillet 2006, soit deux ans après l'ouverture du marché aux clients non domestiques, les nouveaux entrants ne fournissent que 4,2% des sites éligibles représentant 10,3 % du marché.

Un programme de mise à disposition temporaire de gaz par Total et GDF a été mis en place au 1er janvier 2005 pour trois ans. Les quantités concernées, 16 TWh annuelles, ne permettent que le développement d'une concurrence limitée.

L'existence d'importantes congestions sur le réseau de transport, entraînant l'existence de cinq zones d'équilibrage est un frein, majeur au développement de la concurrence. La concurrence se développe ainsi plus vite dans le Nord et l'Est de la France ou le gaz en provenance du Nord de l'Europe est accessible. En revanche, l'insuffisance de ressources disponibles dans le sud de la France empêche les fournisseurs alternatifs d'être en mesure d'y faire des offres concurrentielles. Les programmes de mise à disposition de gaz restent à cet égard insuffisants.

Les règles d'allocation de capacité doivent continuer à évoluer afin de limiter le nombre de refus d'accès. Conformément au règlement européen n° 1775/2005, des mécanismes de *use it or lose it* de long terme doivent être mis en place. Dans le cadre des engagements pris auprès de la Commission européenne dans le dossier Marathon, GDF s'est engagé à réduire de quatre à deux le nombre de zones dépendant de GRTgaz au plus tard en janvier 2009: les actuelles zones Nord, Ouest et Est devront fusionner en une seule zone Nord. La mise en service d'un nouveau terminal gazier sur la méditerranée à Fos Cavaou, fin 2007, devrait aussi permettre une amélioration.

Séparation des gestionnaires de réseau

Bien que la situation s'améliore, notamment au niveau de la transmission, de nombreuses insuffisances persistent.

La CRE a indiqué que les codes de bonne conduite élaborés par les gestionnaires de réseaux de transport et de distribution en 2005 restent insuffisants en matière notamment de non-discrimination. Selon elle, leur accessibilité n'est pas toujours aisée et ils demeurent largement méconnus des utilisateurs des réseaux. L'indépendance des dirigeants des gestionnaires de réseaux doit également être mieux garantie, en évitant notamment que les mêmes dirigeants puissent être nommés au sein de la maison mère et du gestionnaire de réseau.

EDF et GDF gardent des identités visuelles proches pour leurs activités de fourniture et de gestionnaire de réseau de distribution. Il en est de même pour Total pour ses activités de gestionnaire de réseau de transport. Cette confusion peut conduire les consommateurs à penser qu'il encourt des risques en matière de qualité et continuité d'alimentation s'il change de fournisseur. En ignorant la séparation des activités, la communication institutionnelle de ces groupes renforce cet effet. L'importance de cette question est renforcée par l'existence d'une structure commune de distribution entre EDF et GDF, qui est en contact direct avec la clientèle, et peut favoriser une des entreprises aux dépens de nouveaux acteurs.

En l'absence de séparation juridique des gestionnaires de réseau de distribution avant le 1er juillet 2007, leur indépendance effective soulève en outre des interrogations. Tout

gestionnaire de réseau doit pouvoir décider de ses investissements en toute indépendance vis-à-vis de sa maison mère dans le cadre de l'enveloppe globale qui lui est allouée. Ce n'est pas le cas de Gaz de France Réseau Distribution, d'EDF Réseau Distribution et d'EDF Gaz de France Distribution pour les investissements importants. Une procédure d'infraction était en cours à ce titre et a entrainé le changement des dispositions en cause dans le cadre de la seconde loi de transposition de novembre 2006.

Un grand nombre d'opérateurs insistent sur l'importance du rattachement du stockage à une société indépendante ou au gestionnaire du réseau de transport, au lieu de l'entreprise de commercialisation.

Pouvoirs du régulateur

La nécessité d'une clarification des relations et des compétences entre le Ministère et le régulateur a été soulignée à plusieurs reprises par les acteurs du marché. Le Gouvernement a notamment un droit de véto quant aux tarifs d'utilisation des réseaux fixés par la CRE. La CRE n'a pas de pouvoir de surveillance des marchés qui appartient au Conseil de la concurrence. Les pouvoirs du régulateur doivent donc être accrues et inclure la surveillance des marchés, la fixation et l'approbation des tarifs d'accès au réseau, y compris la régulation ex-ante des tarifs d'accès au stockage, ainsi que la fixation des tarifs régulés pour éviter minimiser les influences politiques.

En outre, le stockage fait l'objet d'un accès négocié. Un grand nombre d'opérateurs insistent sur l'importance de la mise en place d'un accès régulé sous le contrôle ex-ante du régulateur. La lourdeur des procédures administratives d'autorisation pour le développement de nouvelles capacités est enfin mise en cause par certains opérateurs.

Transparence

Les codes de bonne conduite élaborés par les gestionnaires de réseaux de transport et de distribution en 2005 restent insuffisants en matière de transparence.

Les fournisseurs ne bénéficient pas d'un accès identique aux dossiers des clients dans les systèmes d'information des gestionnaires de réseaux de distribution. Dans le domaine du gaz notamment, les gestionnaires de réseau de transport doivent publier sur leur site internet un catalogue de prestations comportant les règles de tarification correspondantes.

Dans le domaine de l'électricité, la transparence au niveau de la production est mise en cause pour les nouveaux entrants. Les producteurs français ne sont soumis à aucune obligation de publication d'information ex ante ou ex post en ce qui concerne la disponibilité, la structure ou le fonctionnement du parc de production. Seul EDF dispose ainsi d'informations sur la disponibilité de l'essentiel du parc de production. EDF Trading dispose en outre ainsi d'informations privilégiées par rapport aux autres traders du marché. Des «Chinese walls» entre EDF Trading et EDF Production sont à ce titre nécessaires.

Intégration communautaire

Dans le domaine de l'électricité, les capacités d'interconnexions avec les pays voisins restent très insuffisantes pour que se développent une concurrence transfrontalière importante. Le taux d'interconnexion avec la Péninsule ibérique est ainsi l'un des plus bas d'Europe. Les

interconnexion avec la Belgique et l'Allemagne ne permettent pas le développement de marchés régionaux.

Pour le gaz, la capacité d'importation totale est d'environ 70 Gm3/an. Le sud du pays ne dispose pas de capacités d'interconnexions suffisantes. La nouvelle interconnexion d'Euskadour avec l'Espagne en service depuis juillet 2006, ainsi surtout que la mise ne service fin 2007 d'un nouveau terminal méthanier à Fos Cavaou, représentant 20% de la consommation de gaz, devrait remédier à la situation, le flux dominant devenant sud/nord.

Conclusion

La France doit mettre en place un cadre législative et réglementaire permettant la mise en œuvre effective de l'ouverture des marchés. La régulation des prix doit être réformée de façon à permettre le développement d'un choix effectif pour les consommateurs, en se concentrant notamment sur la protection des plus vulnérables. Le bas niveau artificiel des prix aura également un effet négatif en terme d'investissement avec un risque accru de rupture de fourniture gazière et électrique.

Au-delà, la position ultra dominante d'EDF et de GDF, et leur accès à une énergie à bas coût par, respectivement, la génération nucléaire et des contrats d'importation de long terme, constituera pour les années à venir un frein très important à l'introduction d'une concurrence effective. La mise en place de programmes régulés de mise à disposition d'électricité et de gaz par EDF et GDF, dans des conditions permettant le développement d'une concurrence effective, semble à ce titre indispensable. Les règles de concurrence doivent également être pleinement appliquées au niveau national comme communautaire.

Dans la perspective notamment de l'ouverture du marché pour les clients résidentiels, la confusion d'image entretenue entre les activités concurrentielles et de gestionnaire des réseaux de distribution d'EDF et de GDF présente un grave risque de distorsion de concurrence. La faible connaissance de l'ouverture des marchés par les PME fait enfin craindre un schéma aggravé pour les particuliers.

Si rien n'est fait, il existe un risque très important d'échec de l'ouverture des marchés en France au détriment des consommateurs, entreprises comme particuliers.

IRELAND

Main issues

- **Market opening and competition:** the incumbents (ESB and NIE) dominate the electricity markets in the Republic of Ireland and Northern Ireland. ESB is required to offer a significant amount of such capacity to other potential suppliers through virtual power plant (VPP) auctions conducted on an annual basis. The gas market in both jurisdictions is currently only competitive for commercial customers.

- **Regulatory authorities:** in Ireland, the Commission for Energy Regulation ("CER") has a high degree of powers and autonomy. However, it is required to comply with policy directions issued by the relevant Minister. In Northern Ireland, the regulatory agency "Ofreg", established in 1992, has a high level of independence. In both cases, the regulator has no competence for cross-border issues.

- **Unbundling**: in the Republic of Ireland, the electricity transmission system operator, Eirgrid, was established as a separate company responsible for operation of electricity transmission on 1 July 2006. The required unbundling has not yet been implemented in practice for the gas transmission system operator. In Northern Ireland, legal unbundling of the electricity transmission system operator was carried out: a separate legally separate company (SONI) within Northern Ireland Electricity has been established. The main gas transmission pipelines are already legally separated.

- **EU integration**: A merged wholesale and balancing electricity market will clearly yield some immediate benefits. Without this, new entrants will not feel comfortable in entering either the production or the supply market for electricity. It is likely that the gas market in Ireland will remain heavily influenced by the British market.

- **Public service obligations:** market participants noted that competition had been affected by the regulation of end-user electricity prices.

Overview of regulatory framework

Considerable regulatory effort is underway to integrate the gas and electricity markets of both the Republic of Ireland and Northern Ireland. This document therefore assesses the two jurisdictions in a common document in anticipation of the results of this work. A common wholesale market for electricity is expected to be established by the end of 2007 and legislation is under preparation in both jurisdictions.[6] . Further measures relating to co-ordination of the work of system operators and regulatory agencies is also being examined.

Republic of Ireland

The opening of the electricity and gas markets in Ireland has been carried out over the period 1999-2005, broadly in line with the timetable required by European Directives. The first electricity and gas Directives were implemented through the following primary laws:

6 In the UK, the Northern Ireland (Miscellaneous Provisions) Bill includes the relevant energy clauses. Legislation is also being prepared in the Republic of Ireland

Electricity Regulation Act 1999

Gas (Interim Regulation Act) 2002

These pieces of legislation have been modified through secondary legislation ("Statutory Instruments" signed off by the relevant Minister) in order to implement the more detailed requirements of the second gas and electricity Directives. In terms of the key parts of the requirements of the Directives:

full market opening was implemented for electricity in February 2005 by Statutory Instrument (SI) numbers 632/2003. SI 426/2004 opened the market for gas for non-households and full market opening will be in force by October 2006;

unbundling of the electricity transmission system operator was encoded in the 1999 and Act as modified by SI 445/2000, 145/2002 and 328/2003. Eirgrid was established as a separate company responsible for operation of electricity transmission on 1 July 2006. The required unbundling has not yet been implemented in practice for the gas transmission system operator although it is required by SI 760/2005.

There is, as yet, no requirement for electricity distribution networks to be legally separated. This is not required by the Directive until July 2007. Distribution networks are separated in functional and accounting terms.

The regulatory agency: the Commission for Energy Regulation ("CER") was established in the 1999 Act and its duties were extended to gas in the 2002 Act. The regulatory has a high degree of powers and autonomy. However the CER is required to comply with policy directions issued by the relevant Minister. For example, one such direction established the current trading arrangements. The Ministry is also responsible for all offshore gas activity. The Competition Authority for Ireland is responsible for the application of competition law in the energy sector and there is a co-operation agreement in place with the CER.

Northern Ireland

In Northern Ireland, market opening has been implemented largely though Ministerial Orders as follows:

Electricity Order (1992)

Gas Order (1996)

Energy Order (2003)

Secondary legislation to bring these orders in line with European Directives via Statutory Rule (SR) 2005/335 which was signed into law by the Northern Ireland Office on 11 July 2005. A number of other requirements are implemented through the terms of licence conditions. Legislation to cover the gas sector in Northern Ireland is currently out to consultation and will be completed in 2006. In terms of the key parts of the requirements of the Directives;

Market opening to non-households was implemented by SR 2005/335 and associated licence modifications for electricity. Full market opening will be implemented by July 2007. For gas, non households were given the right to chose supplier in July 2006[7] the draft secondary legislation will mean that full market opening will be in July 2007. New developments of the gas distribution network will be exempt from third party access for a period of up to 10 years[8].

Legal unbundling of the electricity transmission system operator was encoded in SI 2005/355. A separate legally separate company (SONI) within Northern Ireland Electricity has been established. The main gas transmission pipelines are already legally separated.[9]

Legal unbundling of the electricity distribution system is not a legal requirement since the existing gas distribution network serves fewer than 100,000 customers.

The regulatory agency: "Ofreg" was established in the 1992 Electricity Order. Its duties were extended to gas in the 1996 gas Order. It has a high level of independence.

Description of the market

The starting point for the development of the electricity market in Ireland was a vertically integrated national monopoly; the incumbent company being Electricity Supply Board (ESB) a state owned company. ESB owned all generation plants and was the monopoly network company and supplier.

Northern Ireland Electricity (NIE) is the incumbent company in the north, a subsidiary of Viridian plc. Until market opening, NIE acted as a single buyer for all electricity production in the province. The largest part of this was as a consequence of long term power purchase agreements with three large independently owned power plants.

For gas the existing incumbent companies are, in the republic, Bord Gas Eireann (BGE); and in Northern Ireland, Phoenix Gas[10], which initially constructed the gas distribution network around Belfast. Its monopoly rights have been gradually withdrawn in this area and will expire in 2007. New distribution networks are currently being developed in Northern Ireland, for which the company concerned BGE(UK) will be awarded exclusive supply rights for a certain period under the terms of the derogation granted by the Commission.

Electricity market

The current position of the major companies in the combined electricity market will be as follows:

ESB owns or controls the output of the vast majority of generation plant in the Republic of Ireland. In addition, an additional amount of generation plant that has been developed recently has been in the context of power purchase agreements between the investors in the plant and ESB under obligations placed on ESB relating to renewable energy and for security of supply

[7] only in the Belfast and Larne area
[8] Commission Decision H (2005) 791
[9] The Scotland-Northern Ireland pipeline is owned by Premier Transmission Ltd. The South-North and NW pipelines are owned by BGE(UK) Ltd.
[10] Phoenix is now owned by Terra Firma Holdings

reasons. A tender process was also carried out by the CER in 2005 for new capacity under such an arrangement. However ESB is required to offer a significant amount of such capacity to other potential suppliers through virtual power plant (VPP) auctions conducted on an annual basis. ESB's supply business consists of two parts. ESB(PES) is the default supplier for all customers which have not exercised their right to choose and their tariffs are regulated by the CER. ESB (Independent) supplies customers at unregulated prices. ESB have also renovated one of the major power plants (Coolkeragh) in Northern Ireland and have penetrated the supply market.

NIE still controls a large part of production in Northern Ireland through its remaining PPAs with two of the three major generating plants (Ballylumford and Kilroot)[11]. NIE also operates a separate subsidiary known as "Power Procurement Business" (PPB) which is the counter-party to long term contracts. In addition to this it has expanded in the Republic and is in the process of constructing a second 400MW CCGT unit in Dublin. Their supply company in the Republic of Ireland, Energia, has built up a market share of some 5-10% in the south, concentrating on the commercial market. NIE currently supply at regulated prices in the north in the same manner as ESB in the Republic of Ireland. NIE is also under some obligations to release capacity since PPB are also obliged to sell to other suppliers at regulated prices.

BGE supplies electricity in both jurisdictions. They have participated in the virtual power plant (VPP) auctions that were organised by ESB from 2001. The do not, as yet, have their own generation plant.

Airtricity are a supplier of renewable energy. They have numerous wind power generation plant in Ireland and the UK, they supply both businesses and households in both jurisdictions,

Other UK companies such as Powergen, Scottish Power and Scottish and Southern hold licences to supply in both jurisdictions. They have some retail customers in Northern Ireland as a result of UK wide arrangements.

In conclusion, ESB and NIE remain the dominant suppliers by a long distance, with ESB the larger of the two. A key component of ESB's dominance is in the determination of the prices in the wholesale and imbalance market in Ireland via their ownership of the vast majority of plant. PPB is currently the only supplier of balancing energy in Northern Ireland.

In both jurisdictions, market participants noted that competition had been affected by the regulation of end-user electricity prices. In the republic of Ireland these are set with reference to the so-called "Best New Entrant" price. Until 2005 this mechanism ensured that regulated tariffs were set at reasonable levels reflective of conditions and which allowed for a degree of competition. The volatile market for gas in the GB market (the main source of gas for potential new entrants) during winter 2005 has, however, led to some difficulties in the interaction of regulated prices with the competitive market. Similar concerns now also are beginning to emerge in Northern Ireland.

At present, regulation of end user prices is considered by regulators as a way to deal with the issues relating to dominant position. It is further argued that the requirements on the main incumbents through VIPP auctions on one hand and the obligations on PPB on the other hand seek to continue to leave room for new suppliers to enter the market even if they do not yet

[11] These plants are owned and operated by Premier Power a subsidiary of BG Group plc (Ballylumford) and AES (Kilroot).

own generation plant. Certainly companies see VIPP as being a vital transitional tool for allowing for market entry. However, with the establishment of the all-island market, alternative solutions are being considered which would directly control company behaviour in the wholesale market, without necessarily affecting retail prices.

As regards the activities of network companies, the main criticisms centred on the operation of the imbalance market and, above all, the timeliness of information provided to network users on prices and their degree of exposure. There was clear evidence of some problems experience during Winter 2005. While in Northern Ireland there is a view that the degree of separation of the TSO (SONI) from NIE needs to be made more obvious and other companies need to be given freedom to bid. These issues are expected to be resolved by the merging of balancing markets under the all-island project..

As regards the distribution system, the procedures for allowing large companies to change supplier were seen to be acceptable and a large proportion of these companies have already taken the opportunity to move away from the incumbent both North and South of the border. Barriers still remain for smaller companies. In particular, the current requirement in Northern Ireland for companies changing supplier to install a hourly read meter is seen as a strong disincentive. Such difficulties seem rather less pronounced in the Republic.

Gas market

The gas market in both jurisdictions is currently only competitive for commercial customers. In both cases, the market for households and smaller businesses is rather small and not well developed in terms of competition. The market in Northern Ireland is particularly small and the fact that the distribution company is exempt from the main unbundling requirements due to its size is likely to restrain competition. This description focuses on the market for larger users and particularly power plants whose consumption of gas is roughly 80% of the total used.

For these customers, gas is mainly imported from the liquid and competitive British gas market. The companies which are currently importing gas are as follows:

BGE, for supply to their final customers in both jurisdictions,

BG Group for use in their Ballylumford generation plant in Northern Ireland,

Phoenix Natural Gas, to supply its customers in the Belfast and Larne area.

ESB for use in their gas fired generation pant (and for potential supply to final customers)

Viridian for use in their gas fired generation pant (and for potential supply to final customers).

There are currently, therefore, 4-5 potential participants in the Irish gas market and a high level of effective competition for large gas customers.

Evaluation of future prospects

It is important that the all-island electricity market develops rapidly in order to stabilise the regulatory framework for new generation investment and provide a clear reference price at the all-island level. Further generation investment on a non-market basis, for example via tender arrangements, must be avoided. Similarly the role of regulation of end user prices needs to be

carefully examined and revised where necessary. An effort must be made to make incumbent companies more "normal" participants in their home market to avoid perverse incentives.

This means that the key issue of ESB and, to a lesser extent, NIE dominance of their local markets needs to be addressed. A merged wholesale and balancing market will clearly yield some immediate benefits. Without this, new entrants will not feel comfortable in entering either the production or the supply market for electricity.

Lack of new entry suggests that innovation in, for example, the supply market appears to be limited. Currently non-incumbents generally operate by providing a small discount to the regulated price. There do not appear to be longer term hedging arrangements being made available. This may become more important as increasing reliance on gas fired generation is making prices very volatile.

It is likely that the gas market in Ireland will remain heavily influenced by the British market and the scope for competition will remain reasonably positive as a result, especially for larger commercial customers. However, given the small size of the remaining market, successful competition will require the removal of all possible regulatory obstacles to new entrants – otherwise they are unlikely to bother. This crucially depends on the implementation if distribution system operator unbundling which is required from 2007 in the Republic of Ireland but not necessarily at all in Northern Ireland given that the exemption has been applied.

Conclusion

The consideration of further measures to strengthen **unbundling**, especially in the light of the all-island market might be warranted. The formation of a single independent system operator (ISO) for the island could be desirable. A higher level of integration with GB intraday and balancing markets would also help reduce market dominance questions.

It is not considered necessary for the role of the regulators in question to be significantly strengthened and there does not seem to be significant issues as to the role of the two agencies. Co-ordination is relatively strong, although this will need to improve once the all-island wholesale market is in place. For example appropriate arrangements for unified market surveillance and transparency are required. This may require greater co-ordination with competition authorities or the assumption of such powers by regulators.

Removal of barriers to smaller customers' switching supplier needs to be implemented, including the finalisation of unbundling of distribution system operators. Regulation of end user tariffs need to be reconsidered where they are forming a barrier to market entry.

ITALY

Main issues

- **Market opening and competition:** in January 2003, the Italian gas sector was fully liberalised; for electricity, only households are not yet able to choose their supplier. There is a fully functioning Italian Power Exchange (IPEX). As far as gas is concerned there not enough liquidity for a proper exchange, but a Virtual Trading Point ("Punto di Scambio Virtuale"), managed by SnamReteGas, the national gas TSO allows some trading.

- **Regulatory authorities:** the Italian regulator (AEEG) has sufficient powers, ensuring a stable regulatory framework. Its financial and human resources seem to be adequate for its tasks. It is independent and very active. The regulator's competence for cross-border issues is not sufficient

- **Unbundling:** Legal unbundling has been carried out. Terna, the electricity TSO, is also ownership unbundled and owns transmission assets. Functional unbundling of DSOs and of the gas TSO is however questionable.

- **Transparency of the market:** Despite significant advances transparency is still an issue, due to substantial market power of some players, which allegedly manipulate prices. The Italian regulator jointly with the Anti-Trust Authority (AGCM) carried out several investigations and fined many companies.

- **EU integration**: electricity interconnection capacities are substantial, but still insufficient to meet demand. Gas import infrastructure (Italy is not a transit country) also needs upgrading, due to growing CCGT demand.

- **Public service obligations:** No PSO obligations have been notified to the Commission so far. Households have the right to be supplied at regulated prices

Overview on regulatory framework

The first step towards liberalisation was the approval of Law 481 of 14 November 1995, establishing the Italian Regulatory Authority for Electricity and Gas (Autorità per l'energia elettrica e il Gas: AEEG). It gave the regulator wide competences, including (inter alia) ex-ante tariff fixations, complaints and appeals

Afterwards the Italy transposition of the energy Directives was made thus far by several legislative measures, taken in different occasions. The most relevant are:

The Bersani Decree (Legislative Decree No. 79/99) - implementing Directive 96/92/EC – started the electricity market liberalisation. It completely reviewed the legal context of the whole power sector and provides the fundamental principles for each segment of the power industry, including:

• the full liberalisation of the generation segment, providing for the issuance of new and faster rules for the authorisation of the construction and operation of power stations and forcing ENEL, the former monopolist, to dispose of 15.000 MW of generation capacity; three generation companies (GENCOs) were established and spinned off.

• the reduction of concentration in the market, with the introduction of a 50% maximum market share cap on electricity that can be generated in or imported into Italy by a single player.

• the creation of wholesale market competition;

• the establishment of an electricity exchange (IPEX, operated by GME. Trade started on 1 April 2004);

• the liberalisation of power imports, with the introduction of the third-party access regime to the cross-border interconnectors in favour of eligible customers and traders;

• the legal unbundling of transport and distribution activities;

• the regulation, under a third-party access regime and regulated tariffs, of transmission and distribution lines;

• the independent management of transmission and dispatching functions; and

The Letta Decree (Legislative Decree No. 164/2000 - implementing Directive 98/30/EC) gave a strong impulse to the creation of effective and increasing competition, liberalising the activities of importation, exportation, transportation and dispatching, distribution, and trade of natural gas. Among the most relevant provisions:

• the legal unbundling of transport, storage and distribution activities;

• the reduction of concentration in the market, with the introduction of a 50% maximum market-share ceiling on gas sold to final customers and of 75% of gas imported into Italy by a single player.

• the creation of wholesale market competition;

• the eligibility for all customers by January 2003;

Later Law No. 239/2004 - implementing Directive 2003/54/EC – provided for reorganisation of the energy sector as a whole and established, among others, general objectives of energy policy, including:

• the definition of the scope of central government exclusive competence (transmission issues, import/export, competition, distribution concessions and authorisation of power plant construction, etc), vis-à-vis the competences of regions;

• the introduction of an exemption regime to the third party access right to infrastructure, in cases of new interconnection lines, LNG import terminals and storage plants;

The process is still ongoing: new legislation is in preparation.

Description of the market

Electricity

For electricity, the main participants in the markets are as follows:

• In 2005 global electricity consumption has been about 330TWh. Of these 20 TWh are autoproducers, 160 TWh "switched" customers and 150 "unswitched" customers. Of these 65 TWh are "households" (i.e. not eligible) and 85 TWh are eligible customers that nevertheless chose to stay in the regulated market.

• In terms of electricity generated, five operators have a market share of over 5%: Enel Produzione (39%), Edison Group (11,7%), Eni Group (9%), Endesa Italia (8.2%) and Edipower (8%).

• TERNA is the transmission system operator (TSO): as of 1 July 2007, no electricity market player is allowed to hold a stake in Terna exceeding 5% of relative share capital (Enel presently owns 5,12%)

• Acquirente Unico SpA is the single wholesale buyer for the load of the captive market.

• On 30 June 2006 there were 168 distributors in Italy. The largest one, Enel Distribuzione is legally unbundled since 1999. The legislation does not impose sufficient functional unbundling (decision making and management).

Gas market

For gas, the main participants in the markets are as follows: **ENI** 43,9%, **Enel Group** 15,4%, **Edison Group** 7,7%, **AEM Group** 2,6%, **Hera Group** 2,5%, **E.ON** 1,5%, **Gaz de France** 1,5%.

In terms of sectors the Italian natural gas consumption (85 bcm in 2005) can be divided as follows[12]: 43% Gas fired power plants (of which 4% for heat generation), 25,6% households, 21,1% Industry, 9,6% Services, 0,5% CNG vehicles.

SnamReteGas (50% owned by ENI) owns and operate all the transport pipelines; the activity is regulated in detail by a grid code. According to recent legislation ENI had to reduce its ownership to 20%.

Stogit (100% owned by ENI) own and operates most storage facilities

There are about 430 distributors in Italy. The largest one, **Italgas** (100% owned by ENI) has a 32% market share and is legally unbundled since 1999. The legislation presently in force does not impose sufficient functional unbundling. A distribution code has been recently approved.

The establishment of a **Gas Exchange** is under consideration; in the meantime an embryonic exchange of transport capacity is operating.

Issues

Electricity

Functioning of the wholesale market

As regards the functioning of the electricity market, the most important new development in 2005 concerned the active participation of demand in the IPEX (the Power Exchange) bidding

[12] AEEG mail on 18 July.

system. When IPEX opened in 2004, transitional provisions were adopted restricting access to the supply side, the aim being to enable the new negotiating mechanism to build up gradually to full operational status. As a consequence trading on organised spot day-ahead market (i.e. the main segment of IPEX) reached 194,9 TWh, i.e. 59% of the 329.4 TWh of total consumption (net of pumping)

Despite growing market liquidity substantial concerns remain: The AEEG and the Anti-Trust Authority (AGCM) carried out a joint investigation which showed that in 2004 one operator, Enel, enjoyed substantial market power in all four relevant markets, known as macro-zones (Macro-zone North, Macro-zone South, Macrozone Sardinia, and Macro-zone Sicily), while another one, Endesa Italia S.p.A., had market power in Macro-zone Sardinia.

As a remedy to this situation AEEG proposed the adoption of Virtual Power Plants (VPPs); whose technical details have recently been agreed between Enel and the Italian Antitrust Authority (AGCM).

EU integration and trans-border electricity trade

A significant price differential still remains between IPEX and the other EU exchanges. In the period from January 2005 to June 2006 the IPEX showed the highest price for peak-load hours, with the average price as much as double that of the other European markets. Even in off-peak periods, the Italian price was one of the highest over the period as a whole. As a result of this price differential, flow on the interconnection lines with abroad was essentially in the form of imports (50,264 GWh in 2005, i.e. 15,2% of national consumption) with occasional exports (1,109 GWh in 2005).

Despite high volumes of electricity trading with neighbouring countries there is not yet true market integration, given the persisting congestion and transmission constraints preventing alignment between the Italian price and prices in the other markets. The methodology applied until 2006 for congestion management was not compatible with EU rules; the new rules for 2007, released on 19 December are presently under examination.

Functioning of the retail market

The Italian retail market is split in two segments, roughly of the same size: the regulated market is composed of the non-eligible customers (i.e. the households) but also of many eligible non-household customers who never left the segment and still buy electricity at regulated tariffs. In practice in 2005 only about 330.000 customers actually bought electricity on the free market for a total of 136,6 TWh corresponding to 41,5% of national consumption. Enel Group supplies 85.5% of the captive market. Despite the strong dominant position other new entrant suppliers do not allege that Enel Distribuzione is openly abusing it, also considering the service quality and commercial regulations issued by AEEG. Nevertheless some hint that the incumbent still enjoys some competitive advantages granted by the DSOs in more subtle ways, such as by releasing data in less convenient format. In addition incumbents, which sell under the same brand as before, have a priceless communication advantage. The consideration to impose "brand unbundling" is being considered by AEEG.

On the other hand it appears that the low switching rate is determined more by the structure of the Italian productive system, composed by a very high number of SMEs and very small enterprises. Some new suppliers say they are not interested to supply customers consuming less than 20 MWh/year, because of commercial and administrative costs. For example for a

consumption of 50 MWh/year the gross sales are € 5000 year. Roughly € 2000 represent transmission and distribution fees, which are regulated and more than € 500 are taxes. The price of the energy itself is then less than € 2000, an amount where it is very difficult to extract a margin sufficient to offset administrative and commercial costs and generate any significant profit. As a consequence, according to a recent AEEG survey, switching rates become significant only above 100 MWh/year of consumption.

SMEs representatives, on their part, say that they are held back by fear (probably unfounded) that this would mean a lower level of service and by the limited advantage, in term of price, in comparison with captive market, while fearing of ending up paying more. In some cases salesmen promised vary favourable conditions which were not confirmed in the actual contracts. In practice in the common sales practices salesmen peddle the advantages of the new supplier without properly disclosing the disadvantages; as a consequence they raise high expectations that are often not fulfilled, disappointing the customers who become more and more diffident. In practice the assessment and comparison of competing offers require higher skills than those common in SMEs and very small enterprises. SME are very often NOT aware of the difference between distributors and suppliers; most of them think that a change of supplier involve a change of distributor. SMEs and very small enterprises have a poor understanding of the energy market and of its rules: forty years of legal monopoly made them passive. Notwithstanding the wariness of many SMEs, those which did enter the free market are satisfied. Some however regret that the service is slower for some technical needs, such as increase of contracted power capacity and/or upgrading of transformers. In fact operation of network is more decentralised for customers in the regulated market. SMEs are confused because the effect of competition is lost in the general rise of energy prices; in addition regulations change too often for them. The expectations are that a stronger competition could lower the prices for the final customer and foster more transparent offers. In practice switching becomes worthwhile at a threshold of around 30 MWh/year, i.e. roughly in line with the position of suppliers.

Finally it is worth noting that paradoxically the first switch, from the regulated market to the liberalised one is quite simple: it takes about 30 days and the new supplier takes care of all the paperwork. On the following switches are often more difficult: the contracts require notices up to six months, making the switch cumbersome, and some even do not allow termination before expiration. In addition the offers are often too complex for SME, who do not understand on which component of the tariff the discount operates.

Some suppliers are trying to solve these problems by conventions with SMEs trade associations.

Generation capacities

In the last few years the Government authorised almost 21.000 of new generation capacity (including replacement of old plants); more specifically, 2105 MW of extra installed capacity were commissioned in 2004 and more than 4.000 MW in 2005, mainly in the form of CCGT plants. Total net installed capacity has reached 85.500 MW. This change has increased overall efficiency in power generation, and has determined a decrease in the degree of concentration on the supply side, but at the same time increased natural gas demand putting strain on import infrastructures and raising the problem of security of supply.

Building of infrastructure

After the purchase of the transmission lines owned by AEM and Edison, Terna (which is ownership unbundled) currently owns over 96% of the National Transport Network (Rete di trasporto nazionale, RTN), but is responsible for the operation of all of it. The 39.000 km of high tension are however insufficient to meet the growing demand. Congestion occurs both on the internal network and on the trans-border lines. On 31 January 2006 Terna has presented its strategic development plan, which foresees investment for over € 2 billion.

In addition there are plans to build some "merchant lines" to improve trans-border interconnection capacity: the new capacity will be limited to 4.000 MW for AC lines plus 4.000 MW for DC lines.

Gas

Functioning of the wholesale market

In 2005 natural gas consumption totalled 85 billion m3, of which 14% produced in Italy. Domestic production amounted to 12 billion m3, a decrease of 7.6% on the figure for 2004

The natural gas market is strongly dominated by ENI: it has 84% of domestic production and has a 65% direct share of imports. Considering the gas sold by ENI to new entrants outside the national borders such share rises to 72%. In fact Italy imports gas through five infrastructures: TAG pipeline (NE, mainly Russian gas), TENP pipeline (North, mainly Norwegian gas), Panigaglia LNG terminal (NW, mainly Nigerian and Algerian gas), TTPC pipeline (SE, Algerian gas) and Green Stream pipeline (South, Libyan gas). All five infrastructures are under ENI's direct or indirect control. ENI also controls Stogit, the main national storage operator. Finally it owns 50% of SnamReteGas, the national gas TSO, which is not functionally unbundled.

The import infrastructure is mainly used for import contracts linked to take or pay contracts, many of which were entered into by ENI shortly before the European Directive of 1998 on market opening entered into force. At end 2005, 50% had a residual duration of between 10 and 15 years, 19% of between 15 and 20 years, and 4,4% of over 20 years. In the short-term, marginal transportation capacity made available by the flexibility of some import contracts also appears difficult to use, since the absence of a European regulatory framework for tariffs and for transparent, non-discriminatory access to international gas pipelines means that its use is still fraught with difficulties.

In fact the Commission has expressed strong concern about ENI because it refuses to upgrade TAG and TTPC pipelines, assuring 13 bcm/year of new import capacity. In his hearing in the Italian parliamentary committee for productive activities on 19 January 2006 Mr. Ortis, the President of AEEG implicitly blamed ENI for the gas supply problems the country is experiencing, claiming that Italy's strategic gas reserves are "insufficient" for emergencies. Within the same framework in February ACGM fined ENI of € 290 million for abuse of dominant position, pursuant Article 82 of EC Treaty[13]. ENI appealed in Court against the fine.

[13] Resolution n° 15174 – Case A358.

Functioning of the retail market

In spite of the some concentration occurred recent years, ownership of the distribution network remains very fragmented, with about 430 operators; most of them also own the network. The Eni Group controls 32% of the market, through Italgas. In June 2006 the AEEG approved the standard Distribution Network Code, which contains rules for access to and delivery of the gas distribution service. It is aimed to regulate and clarify relations between the companies operating distribution plants and the sales and wholesale companies using these facilities, and to insure that DSOs act a neutral and non-discriminatory manner towards wholesalers and suppliers.

In December 2006 380 companies owned a gas sales licence; most of them represent unbundled sales divisions of formerly integrated distribution companies. However the market is strongly dominated by the three largest groups: Eni (43.0%), Enel (15.8%) and Edison (7.9%). In 2005 these three operators covered:

91% of sales to electricity producers (in order: Eni, Enel and Edison);

71% of sales to industrial customers (in order: Eni, Enel and Gaz de France);

43% of sales to commercial and service sector customers (in order: Eni, Enel and Hera);

Although all customer (including domestic ones) are eligible since 1 January 2003, the switching rate is significant (23%) for large customers (i.e. consuming more than 200,000 m3/year), much lower (3%) for medium customers (consuming between 5,000 and 200,000 m3/year), negligible (1%) for small customers (consuming less than 5,000 m3/year). However in terms of volume the figures are 53%, 6%, and 1% respectively.

Domestic customers have the right to be supplied at a regulated price.

Security of supply

Gas consumption increased considerably in the last few years, mainly driven by new CCGT power plants. While gas domestic consumption is stable at 28-30 billion m³ as well as industrial at 20-21 billion m³ it grew from 25 billion m³ in 2003 to an estimated 35 billion m³ in 2006 and a forecasted 40 billion m³ in 2009. Global consumption was 85 billion m³ in 2005, but could amount to between 98 and 112 billion m³ in 2015. The growing demand and the dwindling domestic production put strain on the gas import and storage infrastructure, whose capacity had remained substantially stable. When electricity exports grew brusquely (by 40% from October to December 2005), driven by the favourable prices in foreign power exchanges, gas demand from power plants peaked as well, while at the same time a very cold winter caused an high demand from domestic heating. The country found itself in a critical situation and a state of emergency was declared on 19 December 2005. Things worsened markedly in January 2006 with the reduction in gas imports from Russia, initially (first few days of January) as a result of the crisis with the Ukraine and then of the cold spell which increased withdrawals in all the countries of the former USSR. Supply to some interruptible customers had to be curtailed and dual fuel industrial and thermoelectric plants were instructed to burn BTZ fuel oil. Heating was reduced in all buildings.

A detailed emergence plan has been prepared for winter 2006-2007, which includes optimised use of infrastructure and several gas saving measures. However the solution will be a planned substantial upgrade of import and storage infrastructures.

Infrastructure

The plans include upgrades to the TAG transit pipeline in Austria (of 3.3 billion m3 in 2008-09) and the TTPC transit line in Tunisia (3.2 billion m3 in 2008-09), plus a further upgrade that will take place in the following years.

In addition a Greece-Italy Interconnection (Italian acronym IGI) could come into service in 2010. This would enable imports of over 8 billion m³/year of gas passing through Turkey and extracted in Russia, the Caucasus and Iran.

Two more pipelines are also being developed: the Trans Adriatic Pipeline which would also bringing gas from Turkey crossing the Adriatic and Albania; and a new Italy-Algeria Pipeline, passing through Sardinia (known by its Italian acronym GALSI).

As far as LNG is concerned there are eleven terminals under consideration. However only three of these have been granted authorisation to proceed, and construction work is under way on one (Rovigo) to be operating in 2008-2009 while the second (Brindisi) is facing a strong opposition from local communities.

Present storage capacity is about 14 billion m³; six new concessions have been granted by the government for an extra capacity of 8,5 billion m³, which could become operative in 2009.

Electricity and gas

Powers of regulator

The Italian Regulatory Authority for Electricity and Gas (AEEG) was established by Law 481 of 14 November 1995. It enjoys a high degree of autonomy from the government, and its regulatory powers include the setting of tariffs and the definition of service quality standards and the technical and economic conditions governing access and interconnections to the networks.

The AEEG board is appointed by government, but nominations are submitted to two Parliamentary Committees for scrutiny, and the appointment is based on a two-thirds majority vote. Appointments are for seven years and are not renewable. To safeguard the AEEG's independence and autonomy, commissioners are expressly forbidden to have any direct or indirect professional relations with any company operating in the regulated sectors during their term in office and the subsequent four years. The AEEG is funded through annual contributions paid by the service providers, calculated as a set percentage of no more than 1/1000 of contributors' revenues for the previous financial year.

Under the terms of its founding law the AEEG may employ a maximum of 210 staff on permanent or temporary contracts (120 or 90 units respectively). In March 2006 personnel amounted to 118 (fifth largest in EU25).

All stakeholders agree on the qualification and effectiveness of the regulator; indeed some consider the sector is over regulated: AEEG issued 330 resolutions in 2006, 301 in 2005, 254 in 2004 and 168 in 2003.

CONCLUSION

The Italian market has gone a long way towards a fully competitive status: many EU market leaders are nowadays active in what they consider an extremely attractive market. Investment in new generation capacity has been massive, and several gas infrastructures are being built or have been planned. Nevertheless there are still some reasons for concern. Incumbents have retained a dominant position in their respective markets and exercise substantial market power. Transposition of the Directives has been made by means of several implementing measures, approved in different times and circumstances, which create some regulatory uncertainty. Electricity prices are substantially higher than in most EU countries, and the interest for cheaper imported electricity determines a serious congestion problem on interconnection lines. Conversely, control by ENI of all gas import infrastructure prevent full competition development.

New legislation in preparation (Draft Law n° 691) may give a further impulse to an already evolving market.

Cyprus

Main issues

Market opening and competition: The market is 35% open and Cyprus holds a derogation to delay the market opening for all non households customers until 31 December 2008 and until 31 December 2012 for households. Competition in the electricity market is very weak although there are some independent producers stepping in the generation side.

The electricity supply market in Cyprus is small and the measures to boost competition in the market have been relatively recently adopted and therefore competition is yet to develop in the market. However, the strengthening of the TSO unbundling and the establishment of a competitive wholesale market in the short term is recommended.

- **Regulatory authority:** the Regulator is relatively recently established and strengthening of the regulatory capacity is required in terms of resources and competences.

- **Transparency of the market:** there is a lack of transparency in the market because the incumbent company dominates the market and a competitive wholesale market model to allow electricity transactions is yet to be established.

- **EU-integration**: Cyprus qualifies as small isolated system under the provisions of Article 26 of the Electricity Directive.

- **Public service obligations:** The current incumbent company provides public service obligations.

Overview on regulatory framework

Law 122(I)/2003 established the regulatory framework with regard to the electricity market and essentially transposes the old electricity Directive into national law. Cyprus holds derogation from certain provisions of the new Electricity Directive and the law required to comply with the rest of the provisions of the Directive is not adopted as yet.

The derogation refers to delay to open up of the market for all non household customers until 31 December 2008 and 31 December 2012 for households.

The current threshold for market opening is 350 MWh per year and this corresponds to 35% of the market. Despite the fact that the Regulator has issued supply licences, the licences are inactive and consequently the incumbent company EAC remains the single supplier.

Electricity Law 122 (I)/2003 sets up the Cyprus Electricity Regulatory Authority (CERA) and recent law 183/2004 on Natural Gas gives also jurisdiction to CERA over the natural gas market.

The Cypriot Transmission System Operator also established by law 1225(I)/2003.

Description of the market

Electricity Market

Structure of the market

The installed generation capacity is 1118 MW with peak demand at 856 MW in July 2005. Total annual consumption stood at 3940 GWh in 2005.

The Cypriot electricity industry is dominated by the vertically-integrated, majority state-owned Electricity Authority of Cyprus (EAC). EAC generates and supplies 100% of the electricity in Cyprus. EAC owns the transmission network, and owns and operates the distribution network and supply.

Recently, CERA issued eighteen licences to upgrade existing capacity and build new one. Total capacity to be brought into the system is estimated to 2150 MW, including conventional fuels and renewable. Out of a total of 2150 MW for new capacity, a licence for 350 MW has been given to the private sector.

There is no wholesale market in Cyprus and trade is being carried out through bilateral contracts.

Unbundling

The Transmission System Operator (TSO) is legally unbundled and separate accounts are published. The TSO director is appointed by the Ministerial Council. On an interim basis, the staff of the TSO is seconded by EAC, which raises concerns regarding the independence of the TSO.

The function of the Distribution System Operator remains with EAC.

Gas market

There is no gas market does not exist in Cyprus. However, the provisions of the new Gas Directive are transposed into national law because the government has plans to diversify the energy portfolio and bring natural gas into the market.

LATVIA

Main issues

- **Market opening and competition:** The electricity market is, in theory, open for non-household customers. In practice, regulated prices keep the market closed, and not a single customer has changed supplier. The gas market remains closed by virtue of a derogation.

- **Regulatory authorities:** There is an urgent need to create a Baltic energy market. This calls first of all for political will from the Baltic governments but also for more regional or European regulatory powers.

- **Unbundling of DSO:** The main DSO remains vertically integrated. Unbundling has limited meaning as long as there is no competition on the market.

- **Transparency of the market:** There is no functioning market.

- **EU integration**: Cooperation is ensured between the Baltic TSOs and between the Baltic regulators. However, further integration of TSOs and more powers for regulators, including problem-solving mechanisms at regional level are needed in order to create a Baltic energy market.

- **Public service obligations:** Price regulation is preventing development of the market.

Overview of regulatory framework

Latvia implemented the Second Electricity and Gas Directives some time after the deadline of July 2004. Household customers will be eligible with effect from 1 July 2007.

The regulatory authority is the Public Utilities Commission (PUC), a multisector regulator. The regulator sets network tariffs and default supply tariffs.

Cooperation is ensured between the Baltic states and Baltic regulators on energy issues. The Baltic Council of Ministers adopted a Baltic Energy Strategy back in 1999. A resolution by the Prime Ministers and an agreement between regulators was concluded in 2002 in order to establish a Common Baltic Electricity Market (CBEM).

Description of the market

Electricity

The dominant electricity company is Latvenergo, a state-owned vertically integrated utility. In addition, there are approximately 180 small electricity producers and a number of small distribution networks.

The transmission network is part of the IPS/UPS system, where the main player is RAO-UES. The Baltic grid was designed to be operated as an interconnected system. For that reason the interconnection capacity between the Baltic states is high. The Baltic TSOs have a jointly owned company - DC Baltija - to perform certain coordination tasks connected with operation of the network. This company will now be dismantled and its tasks transferred to BALTSO, a newly founded Baltic TSO association.

Eligible customers are in theory free to choose their supplier. In practice the regulated price of the default supplier is so low that no competing offers from outside the Baltic region and North-West Russia are available. Latvenergo was designated as public trader in the Electricity Lawand is under an obligation to supply all customers. As a result not a single customer has used their freedom to change supplier.

There is trading on the Baltic market, but only between the former utilities. The most active independent traders, who are prospecting the wholesale market, are backed by Inter RAO, the Russian import/export monopoly.

A balancing market is developing, because the agreement between RAO and Baltic utilities on balancing is being changed to require the Baltic states to balance their own networks. The TSO, which is responsible for balancing the transmission system, puts out to tender contracts on balancing energy. Latvenergo is the current provider of balancing energy.

Renewable energy is supported in order to meet the renewable target for Latvia.

Gas

The only gas company is Latvijas Gaze, whose main owners are Gazprom and Eon Ruhrgas. It owns the infrastructure including the Inchukalns gas storage facility.

Latvia imports all its gas from Russia. The import price is negotiated between Latvijas Gaze and Gazprom. There are currently no alternative import options.

Latvia has opted for a derogation from the rules in the Gas Directive regarding market opening and unbundling until 2010, based on an emergent market. This derogation keeps the gas market fully closed.

Issues

Electricity

Functioning of the wholesale market

Latvia is an importing country. Latvenergo buys energy from Eesti Energia, from Lietuvos Energija and from Inter RAO. In spring Latvia is able to export excess electricity from its hydroelectric plants.

No end-customers are active on the wholesale market. The default tariff is low, and the possible gain from the price on the open wholesale market remains minimal.

The Baltic TSO association, BALTSO, has competence for coordination of technical operation of the transmission grid. It is not clear what role the association will play in establishing the Common Baltic Electricity Market.

New entrants and new investments

In theory there are no obstacles to new entrants. In practice the structure of the sector, with the dominant player and the default tariff reflecting the current costs of electricity production, makes it almost impossible to enter the market as a generator or a supplier. It remains unclear

how investment in new generation capacity in Latvia will be made. However, investment in co-generation plants and in renewable energy sourcesis more open to new players.

Transparency

Default supply prices are public. Wholesale prices are decided between incumbent companies and are not published.

Functioning of the retail market

In practice there is no functioning retail market, and no customer is actively seeking to change supplier.

In practice the markets in Estonia and Lithuania remain in practise closed as well. In Estonia the market is closed by the derogation obtained in the Treaty of Accession to the EU, while in Lithuania the regulated end-user tariff and its public service components make it very difficult for any non-incumbent company to make competitive offers.

Building of infrastructure

The Baltic market had no interconnection to the rest of the EU until the Estlink undersea cable between Estonia and Finland came into operation at the end of 2006. Latvenergo is a shareholder in the Estlink project and has capacity in the interconnector. Other projects connecting the Baltic market to the rest of the EU are still at the feasibility study stage.

Unbundling

On implementation of the Electricity Directive, the TSO Augstsprieguma tīkls was established as Latvenergo's daughter company. Distribution has been unbundled from Latvenergo's retail business at organisational and functional levels, but its legal unbundling as a daughter company has to be finalised by July 2007 under the Electricity Market Law.

Gas

Functioning of the wholesale and retail market

By virtue of the derogation, Latvijas Gaze is the only player on the gas market. The import price is negotiated between Latvijas Gaze and Gazprom. The retail price is set by the regulator.

There has been a dispute between Latvijas Gaze and the Latvian government about the level of profit which the privatised company is allowed to make. After arbitration the rate of return on capital should now satisfy the investors' requirements.

Infrastructure

In the longer term, new pipelines through Poland or across the Baltic Sea, or an LNG terminal, could provide alternative supply routes for gas. In the foreseeable future Russian gas is the only viable alternative.

Electricity and gas

Powers of the regulator

PUC is generally considered to have sufficient powers and resources to do the work assigned to it. Some market players consider PUC too dependent on political parties.

Cooperation is ensured between the Baltic regulators. However, the framework to regulate the Common Baltic Electricity Market is not clear. Each regulator has powers only on its national territory and over interconnection.

Conclusion

In practice there are no functioning electricity and gas markets in Latvia. In the case of electricity, the market remains practically closed by a low default tariff for all customers, proposed by the state-owned utility and approved by PUC. In the case of gas, there are no real alternatives to imports from Gazprom and a derogation has been granted from market opening and unbundling. In practise the electricity and gas markets in Estonia and Lithuania remain closed as well.

A major rethink of energy policy by the Baltic States' governments is needed in order to create a competitive Common Baltic Electricity Market. The currently closed markets can result in lower prices in the short term, but will seriously harm longer term development of the energy sector. There is no clarity about the framework in which the urgently needed new investment can take place.

The Common Baltic Electricity Market should be reflected in cooperation between and the competencies of the regulators and the TSOs.

Competition on the gas market remains theoretical as long as no alternative import supplies are available.

LITHUANIA

Main issues

- **Market opening and competition:** For electricity, households are not yet able to select their supplier. Competition in the electricity market is very weak. There is no functioning retail market in electricity. For gas, Lithuania has decided to apply the provisions of article 28 of the gas directive (emergent market), which derogate from the market opening requirements.

- **Regulatory authorities:** Although the Lithuanian regulator seems to have sufficient powers and resources there is a need for improved and more effective cooperation with other Baltic Regulators (and TSOs) to create a functioning Common Baltic Electricity Market.

- **Unbundling:** the legal unbundling of DSOs will not take effect until 1 July 2007. For electricity DSOs, Lithuania has applied article 30(2) of the Electricity Directive which allows for a postponement of the implementation date for legal unbundling until 1 July 2007. New legislation to correct this has not yet been adopted. For gas, Lithuania has applied the provisions of article 28 of the Gas Directive (derogation because of an emergent market). Consequently, the gas TSO and gas DSOs are not unbundled. In electricity, the TSO owns transmission assets.

- **Transparency of the market:** there is a lack of transparency in the market. .

- **EU integration**: The Lithuanian electricity transmission network is fairly well-integrated with Belarus, Latvia and Kaliningrad's Region. There is no interconnection with Poland. Current gas interconnection capacities are sufficient, for the existing supplier. There are limited interconnections with other gas markets.

- **Public service obligations:** Electricity and gas retail prices are regulated, which makes it very difficult for any non-incumbent company to make competitive offers. An infringement procedure for non-notification of these PSOs has been initiated by the European Commission

Overview on regulatory framework

In 2005 there were no major changes in the legislative framework regulating the electricity and natural gas markets in Lithuania. National Control Commission for Prices and Energy (NCC) is empowered by the Law on Electricity to monitor the transmission and distribution reliability and supply service quality standards and control the compliance of the network companies. The National Control Commission will evaluate compliance with the quality of service standards setting the next price caps for the network companies in 2008. There were on-going discussions in Lithuania as for the natural gas market liberalization and regulation. Amendments to the Law on Gas were further discussed but not yet approved by Parliament.

The European Commission has launched infringement proceedings against Lithuania. The infringements concern both the implementation of the gas and electricity Directives, with respect to Unbundling(electricity) , notification of PSOs and non-discriminatory access (gas).

The regulatory authority is the National Control Commission (NCC). NCC has received a number of competences in line with the new directive. In addition NCC has the power to

approve the state regulated prices for electricity and gas. The regulator sets network tariffs as well as default supply tariffs.

Description of the market

Electricity

Lithuania has a single national network company Lietuvos Energija AB carrying out the transmission system operator's function. It performs electricity transmission (110-330 kV voltage) network operator, system operator and market operator's functions. As the transmission network operator it works under the electricity transmission license issued by respective institution.

Two undertakings are basically engaged in electricity distribution activities in Lithuania; these are Rytų Skirstomieji Tinklai AB (public holding) and VST AB (private company) and small distributors. Other distribution undertakings are minor or industrial companies with internal networks directly interconnected to the transmission networks within their territories. All undertakings also perform distribution network operator and public supplier's functions. A public supplier is obliged to supply electricity to all customers requesting this within the serviced territory. Separate accounts must be held for each licensed activity.

In 2005 one electricity transmission system's operator, two regional and five local electricity distribution network operators were engaged in licensed activities in Lithuania.

The transmission network has a single national network company Lietuvos Energija AB is part of the IPS/UPS system, where the main actor is RAO-UES. The Baltic grid was designed to be operated as a single system, for that reason the interconnection capacity between the Baltic States is high. The Baltic TSOs have a co-owned company DC Baltija to do some co-ordination tasks of the network operation. Now this company will be dismantled and the tasks are transferred to BALTSO, a newly founded Baltic TSO association.

There is trading on the Baltic market, but the trading takes place between the former utilities. The most active independent traders, who are prospecting the wholesale market, are backed up by Inter RAO, the Russian import/export monopoly.

The Balancing market is developing, because the agreement RAO and Baltic utilities on balancing is changing requiring that the Baltic States balance their own networks. The TSO tenders the contracts on balancing energy.

Gas

The liberalization of the Lithuanian natural gas sector was started in 2000, when the Seimas of the Republic of Lithuania ratified the Law on Natural Gas. According to this law, 90 % of gas consumers to become eligible customers, although as per July 1, 2006, the actual natural gas opening level was 81 %, i.e. unchanged since 2004. 28 gas customers were treated as eligible; a right to the eligible customer's status was given to 113 consumers in total. A new draft of the Law on Natural Gas has been submitted to the Seimas of the Republic of Lithuania for consideration. In this draft, all provisions of the Directive 2003/55/EC are to be implemented including the requirement to open the gas market to all consumers as from 1 July 2007.

Lithuania has opted to apply the provisions of article 28 of the Gas Directive which allows for a derogation regarding market opening and unbundling until 2010 for emergent markets. This derogation keeps the gas market fully closed.

Issues

Electricity

Functioning of the wholesale market

In 2005 Lithuania had four power plants with capacity of at least 5 % of installed disposable power, namely: Ignalina Nuclear Power Plant, Lietuvos Elektrine Power Plant, Kruonis Hydroelectric Pumped Storage Power Plant and Vilniaus Energija UAB. Kruonis Power Plant is a hydro pumped storage power plant and ensures the operational electricity reserve in the country and is operated by the transmission system operator. Kruonis Power Plant does not participate directly on the electricity market.

In 2005 electricity sales abroad by Lietuvos Energija AB amounted to 4.03 TWh. Due to closure of the first unit of the Ignalina Nuclear Power Plant by the end of 2004, electricity exports reduced by 45 %. Lietuvos Energija AB exported electricity to Latvia, Estonia, Belarus, Kaliningrad Region of Russian Federation and continental Russia. Exports to Russia in 2005 accounted for more than a half of the entire exported electricity. Imports in 2005 were 1.06 TWh. Key periods of import cover the spring flood in Latvia and repairs at the Ignalina Nuclear Power Plant.

In 2005 the number of generators on the market did not increase as compared to the previous year, i.e. 8 generators remained, also maintaining almost the same shares in the production sector, except September and October, when the Ignalina Nuclear Power Plant underwent its repairs.

There are three types of trade in the electricity market: electricity sold by contracts, electricity sold in carrying out the obligation of public services and additional electricity. The most popular type of trade on the electricity market (about 60 %) was according to bilateral contracts. The major part of electricity according to bilateral contracts was sold by Ignalina Nuclear Power Plant. Thermal power stations mostly supply energy on the market fulfilling their public service obligations. The largest part of such energy is supplied on the market by Lietuvos Elektrine AB, Vilniaus Energija UAB and Kauno Termofikacijos Elektrinė UAB. Out of all thermal power plants, Vilniaus Energija UAB and Kauno Termofikacijos Elektrinė UAB also sold the highest quantity of electricity according to bilateral contracts.

In 2005 Lithuania had 6 operating eligible customers consuming 1.18 TWh electricity. Ancillary or system services to ensure electricity system operational stability and reliability are provided by the transmission system operator (TSO). Such operator also performs the function of capacity and electrical energy reservation function.

New entrants – investments in generation plants

Within the period of 2006 – 2008, Lithuania will retain a surplus in generating power capacities (also considering possible exports of energy). Taking into consideration the foreseen decommissioning of Ignalina Nuclear Power Plant and Lithuania's obligation to increase electricity generation out of renewable energy resources, construction of private

power stations and power stations using renewable energy resources, mostly biomass and wind energy, is planned.

The existing electricity generation capacities may be further expanded or new generation facilities installed on a new site only after obtaining a license (permit) for development of electricity generation capacities Presently 55 permits for development of electricity generation capacities have been issued and 80 permits for generation of electricity .

In theory there are no obstacles for new entry. In practise the structure of the sector with the dominant player and the default tariff makes it almost impossible to enter the market as a generator or a supplier. It remains unclear how new investments on new generation capacity in Latvia will be made. However, investments in co-generation plants and in renewable energies are more open to other players.

Transparency

Default supply prices are public. Wholesale prices are determined between incumbent companies, these prices are not published.

Functioning of the retail market- Public Service Obligations

In practice there is no functioning retail market, no customer except the 6 biggest consumers is actively seeking to change supplier. In Lithuania the regulated end user tariff and its public service components make it very difficult for any non-incumbent company to make competitive offers. The regulated end user tariffs are part of a PSO, which Lithuania has failed to notify to the Commission.

Infrastructure development

The Lithuanian transmission network is fairly well-integrated with Belarus, Latvia and Kaliningrad's Region and this guarantees exports of electricity. There is no interconnection with the neighbouring energy scheme in Poland.

Contracts for the construction of an electricity transmission line (350 MW) of 110 million EUR value were signed between Estonia and Finland in Tallinn, on April 29, 2005. Lithuanian transmission system operator Lietuvos Energija AB has already invested 5.5 million EUR into this project, whereas its entire investment package to the project will amount to 27 million EUR. Partners in this Estlink project are the following undertakings: Lietuvos Energija AB and Latvenergo (Latvia) to own 25 % shares each, Eesti Energia (Estonia) to be holding 39.9 % shares and Finnish companies Pohjolan Voima and Helsinkin Energija with 10.1 % shares each. The Estlink project connecting Estonia to Finland should be finalised end of 2006, Other projects connecting the Baltic market to the rest of the EU are still in feasibility study stage.

Unbundling

The legal unbundling of the TSO and DSOs will not take effect in Lithuanian legislation until 1 July 2007. For Distribution system operators, Lithuania has applied article 30(2) of the Directive which allows for a postponement of the implementation date for legal unbundling until 1 July 2007. New legislation to correct this has been proposed but not yet adopted.

Lietuvos Energija AB is the transmission system operator. The transmission system operator is not engaged in supply activities. 2 power generation companies function as subsidiaries, i.e. Kruonis hydro pumped storage power plant and Kaunas hydro power plant. These plants ensure the power system balance and continuity of electricity supply in Lithuania. Distribution services in the company are separated from the public supplier's functions by separating the accounting systems of these activities.

The two main Distribution system operators are Rytų Skirstomieji Tinklai AB and VST AB and are also public suppliers. A public supplier is obliged to supply electricity to all customers requesting this within the serviced territory. The costs of these activities are separated. Separate accounts must be held for each licensed activity.

Gas

Functioning of the wholesale and retail market

Lithuania has no own natural gas resources. Gas is imported to Lithuania from a single source, Gazprom AAB. In 2005 gas to eligible customers in Lithuania were supplied by 2 gas supply companies, Lietuvos Dujos AB and Dujotekana UAB. Each of them has bee given a pre-set gas quota by Gazprom AAB: Lietuvos Dujos AB supplied 62 % of gas and Dujotekana UAB 38 % of gas to eligible customers in 2005. Such a situation on the gas supply market created some possibilities to gas suppliers to precondition natural gas prices applicable to consumers: Lietuvos Dujos AB traded in gas with 15 % profit margin and Dujotekana's profit margin reached up to almost 21 % in 2005. Achema AB and Kauno Termofikacijos Elektrinė UAB purchased natural gas directly from Gazprom AAB to satisfy their own needs.

Lietuvos Dujos AB also supplied gas to regulated, as well as eligible customers on the retail market. The market share occupied by both suppliers (i.e. Lietuvos Dujos AB and Dujotekana UAB) is 100 %. Trade in natural gas is carried out by making annual gas sales - purchase contracts. Pursuant to Article 22 of the Law on Natural Gas, the Regulator (NCC) is entitled to be informed about the content of contracts signed between gas undertakings and consumers. Gas undertakings submit the basic conditions of signed gas sales – purchase contracts and annual operational reports to the NCC.

Public Service Obligations

In Lithuania, gas companies are obliged to have their retail gas tariffs approved by an authority and not to sell above the approved tariff. This PSO has not been notified to the Commission.

Unbundling

On July 1, 2006, Lithuania had a single natural gas transmission system operator (Lietuvos Dujos AB (owned by Gazprom, E. ON Rurhrgas and state property), also operating as a distribution system operator, and six local distribution systems operators (all private undertakings). In 2005 the gas sector had 4 natural gas distribution undertakings engaged in gas distribution and supply activities servicing less than 100 thousand consumers. Only Lietuvos Dujos AB serviced more than 100 thousand consumers.

The Law on Natural Gas provides that vertically integrated gas undertakings must handle separate accounting systems of the following activities: gas transmission, distribution, storage and supply. Financial accounting systems for all activities must be handled in such a way as they should be handled, if such activities would be carried out by separate undertakings.

None of the operational natural gas transportation undertakings are legally unbundled from their gas supply divisions. The current Law on Natural Gas does not contain the requirement for legal unbundling of integrated natural gas undertakings. Lithuania has applied the provisions of article 28 of the Gas Directive, regarding derogations from certain articles.

Non-discriminatory access

The Lithuanian licensing regime in Article 5 of the Natural Gas Law differentiates between customer classes and transit/domestic use of gas supplied which constitutes an infraction of the requirements of the Directive.

Eligibility

Natural gas consumers are divided into two categories, that of eligible customers and regulated customers. Regulated customers are the customers having no right to choose the supplier. Eligible customers may choose a supplier by filing an application to the gas supply undertaking, two months prior to the beginning of a calendar year

Eligible customers may choose between two gas supply companies Lietuvos Dujos AB and Dujotekana UAB. Prices of gas sold by these undertakings differ a lot: although they buy gas for similar prices, by selling gas to consumers, Dujotekana UAB apply by 36 % higher profit margin than Lietuvos Dujos AB. Many eligible customers would like to change their gas supply undertaking and purchase cheaper gas from Lietuvos Dujos AB, but their option possibilities are limited by the gas quotas issued by a sole gas seller Gazprom AAB to each gas supply undertaking. Such situation has partially been a precondition of the fact that none of existing eligible customer has changed their gas supply undertaking in 2005.

Due to the duration of the long term contracts between the Lietuvios Dujos AB and Dujotekena UAB with Gazprom(2015 and 2012) , there is no room for competition in the gas sector. Here too, Lithuania has decided to apply the provisions of article 28 of the Gas Directive (emergent market).

Infrastructure

Capacities at the current cross-border points are sufficient for the current suppliers. Lithuania does not foresee any investment to increase its import capacities for 2007-2009.

In 2005 several large investment projects were completed implementing the National Energy Strategy. In 2006 the Ministry of Economy ordered a scientific research study, called the Comparison of Natural Gas Reserve Storage Projects. The study authors will have to analyze possibilities for natural gas reserve accumulation and storage at the underground natural gas repositories in Lithuania, as well possibilities of use of Latvian storages in accordance with technical – economical indicators and strategic reliability.

LUXEMBOURG

Main issues

Market opening and competition

Luxembourg has not implemented Directive 2003/54/EC and Directive 2003/55/EC on the internal markets for electricity and gas. There is some competition for industrial consumers.

Regulatory Authorities

The regulatory authorities do not have the minimum required powers in line with the Directives, and they also lack the power to enforce account-unbundling. They try however to progress in liberalisation by voluntary agreements with market actors. The regulator has no competence for cross-border issues.

Unbundling of TSO and DSO

The TSO's have been legally unbundled but functional unbundling is not ensured in all cases. DSO's that form part of TSO's are also legally unbundled, the rest has less than 100.000 customers and is therefore exempted from unbundling.

Transparency of the market

Transparency is insufficient since the Directives are not transposed.

EU Integration

Luxembourg is a net importer of electricity and gas, and the TSOs rely on neighbouring systems for balancing. This has lead to integration of balancing markets with neighbouring TSOs for electricity but not for gas. Interconnection capacity is not scarce and is thus not a hindrance to market entrance. The failure to implement the Directives obviously is.

Public Service Obligations

PSOs have not been defined as it is not mandatory, due to the fact that the Directives are not transposed.

Overview on the regulatory framework

Transposition of the Directives

Luxemburg has not implemented Directive 2003/54/EC and Directive 2003/55/EC on the internal markets for electricity and gas. The government of Luxembourg has been condemned by the Court and is currently working to implement the Directives. Projects of implementation of the law have been approved by the government and are currently passing through the legislative process. The legal basis in Luxembourg is therefore Directives 96/92/EC and 98/30/EC although they have been repealed.

Regulatory Authority

The regulator gives its view on the tarifs for network use for electricity and gas. However the regulator cannot impose a methodology for cost calculation, but it can suggest measures to the ministry. According to the regulator itself, in practice the system operators largely follow the view presented by the regulator. For gas the tariffs are explicitly approved by the minister after consultation with the regulator.

Control of proper account unbundling is not a competence of the regulator. It has access to accounts but does not have the legal competence to impose account structure nor to take measures when account unbundling principles are not respected.

Unbundling

There are two TSO's for electricity in Luxemburg, Cegedel-Net and Sotel Réseau, who are legally unbundled from their mother companies, and both companies also perform DSO activities being combined operators. Especially SOTEL does not seem properly functionally unbundled. However, since the Directives have not been transposed in Luxemburg law there is no obligation for network operators to unbundle. The other DSO's in Luxemburg have less than 100.000 connections and therefore do not have unbundling requirements at all.

Concerning gas, there is one TSO called Soteg, who has not unbundled. According to Directive 2003/55/EC Article 28.6 Luxemburg may benefit from a derogation of the transmission system unbundling provisions, which is also claimed by the Regulator, even if this Directive has not been transposed into national law. The DSO's have all less than 100.000 connections and therefore have no unbundling requirements.

Public Service Obligations: **Luxembourg maintains regulated prices for domestic electricity consumers.**

Description of the market

Access to networks

Concerning electricity, there is no scarcity of capacity on the interconnections, and therefore no allocation measures are needed. Access to the distribution networks seems limited, as only a few DSO's are legally unbundled, and household prices are regulated.

Concerning gas, third party access to the transport networks is possible, but access to the distribution networks is very limited, but currently the DSO's are working to enable this.

Balancing

To maintain the balance on the systems, Luxemburg depends on its neighbouring countries and their networks.

With respect to electricity, the network of Cegedel-Net is connected to the network of RWE in Germany, and Sotel's network is connected to Elia in Belgium, and the imbalance is integrated in these respective networks.

For gas, there is no integration of balancing zones with networks upstream, although Soteg depends on these networks for maintaining its balance. The gas balancing system is based on

a balancing point, with balancing requirements per hour, day and a cumulated balance per day. The tolerance levels are defined as a fixed percentage of the nomination, thereby favouring large portfolios and being a hindrance for new entrants.

Gas distribution companies are working on improvement of the balancing system, and the goal is to enable pooling of imbalance over the whole distribution system in Luxemburg. The current practice however enables reconciliation only after 15 months. Practical considerations have therefore lead the operators to reconcile provisionarily after one and three months.

Competition

Although the Directives have not been implemented in Luxemburg, some competition is developing on the wholesale market for electricity in the Cegedel zone. New suppliers have entered the market, quite a few in electricity but only one in gas. Luxemburg is a net importer of electricity and gas.

Electricity

Electricity production in Luxemburg is 14% of the total consumption and the main source of import is Germany. Most of the generation is cogeneration which is largely part of a regulated market, and all of them are in the Cegedel zone. The total genertion capacity in this zone is 206MW. The Sotel zone contains one gas-fired generator of 350 MW exploited by Twinerg. There is another generator of 1100 MW in Vianden but it is operated by RWE and is directly connected to the german network and used for balancing purposes only.

Some integrated distribution companies have changed supplier, and wholesale traders are active in import and export of electricity, but the volumes remain limited and the most of the activity takes place on neighbouring market, for example EEX.

Concerning end-consumers, only industrial customers have profited from market liberalisation, and a small percentage has switched supplier. The level of switching of small and medium entreprises is negligible, and the household market is closed.

Gas

The gas market in Luxemburg is entirely dependent on imports, also for its flexibility. The level of consumption was 15,2 TWh in 2005, and one third of this consumption is due to the gas-fired electricity plant of 350 MW.

There is no wholesale market for gas, as supply contracts are all concluded on foreign markets. Soteg is the incumbent supplying the majority of the market, although Gaz de France has also entered the market and is supplying a small part. Switching has only occured at the industrial level, distribution companies have not changed supplier.

Issues

Transposition of the Directives

Luxemburg has not implemented the Directives at all. The regulator however seems to refer to these Directives when working on measures to improve market liberalisation, although it mostly happens on a voluntary basis. Due to the fact that Luxemburg is dependent on imports

of both electricity and gas, and import capacity is not restrained, it seems that competition is developing.

Balancing

The balancing system for gas is discriminatory for new entrants. As opposed to electricity, where the balancing market is integrated with neighbouring systems according to its dependence on these systems, this is not the case for gas. It would be just as logical to install the same practice as for electricity, since gas balancing depends also on the neighbouring system.

Compliance with the regulations

Since the regulations (1228/2003 and 1775/2005) are directly applicable in the Member States they should be respected in Luxemburg, but as the Directives are not even implemented it is not likely that the regulations are respected either. The negative consequences at the moment seem limited however since capacity on the electricity and gas network is not scarce.

Conclusion

Until Luxemburg implements the Directives, there is no point in assessing the functioning of its energy market.

MALTA

Main issues

- **Market opening and competition:** Due to the small size of the market and to the lack on any interconnection with other countries there is currently no competition in Maltese electricity market. As far natural gas is concerned, the country is not supplied at all.

- **Regulatory authorities**: Malta Resources Authority (MRA) was set up by the Maltese Parliament through the Malta Resources Authority Act of 2000. It has wide ranging responsibilities essentially involving regulation of water and energy utilities, industrial enterprises exploiting resources such as oil exploration, quarry operators and private abstractors of groundwater, retailers, operators and tradesmen in the regulated sectors. The regulator has no competence for cross-border issues.

- **Unbundling:** There is no transmission system in the island. Electricity distribution is not unbundled

- **Transparency of the market:** there is no competitive market. Supply tariffs are regulated

- **EU integration**: Malta is not physically interconnected to any other Member State and there is no cross-border trade.

- **Public service obligations**: The Minister can instruct the regulator to authority to impose PSOs on operators which may relate to security, including security of supply, to all consumers, regularity, quality and price of supplies, and environmental protection No provision on labelling; but currently all Malta electricity is produced in oil fuelled plants.

Overview on regulatory framework

Malta Resources Authority ACT (ACT XXV of 2000) established the national regulator. Its functions, which encompass oil and water too, are specified in article 4.

LN 511 of 2004 – Electricity Regulations, 2004 which implements Directive 2003/54/EC.

LN 432 of 2004 – Natural Gas (Marketing) Regulations, 2004 which implements Directive 2003/55/EC

Description of the market

Electricity market

Malta has no indigenous primary energy resources and therefore Enemalta Corporation (the incumbent energy company - hereinafter EMC) relies entirely on imported fuels, mainly heavy fuel oil and light distillate. The total installed capacity in Malta is 571 MW. The generation system consists of two power stations in Delimara and Marsa, which supply all the electrical power needs of the Islands of Malta and Gozo. They are interconnected by means of the distribution grid, but the Maltese national electricity grid is not connected to any other electrical network.

In 1996, the reference year for article 2(26) of Directive 2003/54/EC, total electricity generated was 1.695 GWh, and consumptions marginally less. Malta therefore fulfils the definition of "small isolated system", where the consumption has to be less than 3.000 GWh. Malta submitted a request for derogation pursuant to Article 26(1) of Directive 2003/54, which is presently under consideration. The derogation requested is related to the provisions of Chapter IV on the Transmission System Operator (TSO), of Article 20 "Third Party Access" and Article 21 "Market Opening and Reciprocity".

In fiscal year 2004-2005, the electricity generated in the island reached 2.263 GWh. The demand growth is estimated at 4% per annum. The changing climatic conditions that characterize the Maltese whether have a significant effect on the demand for electricity. The increased use in air-conditioning units in summer has made winter and summer electricity peak demands get very close to one another. Presently Enemalta has a theoretical generation capacity of 571 MW, reduced due to a number of factors to a nominal available generating capacity during the summer months of 495 MW. In addition these power plants are old and partly obsolete, while the three open cycle gas turbines are expensive to operate and are reserved for peak load or emergency duty. The forecasts suggests that by 2009 the maximum peak demand will probably be little short or even exceed 500 MW; in that case the available reserve margin will only be of 12.4% of the total installed capacity. Since at present there are neither authorised nor "in process of authorisation" generation investments, this is a reason for concern. The Malta Resources Authority has launched a call for expressions of interest on the development of offshore wind projects with a peak capacity of 75-100 MW.

Although since 2001 EMC does no longer enjoy any longer a legal monopoly in the electricity sector and legislation envisages authorization for new generation, to date the government has not registered any interest from other undertakings. Presently all electricity is generated and sold by EMC.

No changes are expected for the immediate future. There are feasibility studies on an interconnection line with Sicily (Italy) but there is no indication of a possible timetable. The reasons concern essentially the high costs of building such undersea line, while the high costs of electricity in Italy do not represent an incentive. This possibility has been considered in recent consultation document[14] issued by the government.

Gas market

Currently Malta is not supplied with natural gas and no internal gas market exists. A feasibility study for a Sicily-Malta pipeline commissioned by the Government has been carried out by ENI. The main conclusions of this study were:

- The Maltese market is small, with an approximate demand of 600million m³ annually, assuming all power generation is converted to gas.

- The construction of a gas pipeline is technically feasible.

- The projected cost of the pipeline at 2003 costs was approximately Lm 40 million, but given the large increases in the costs of raw materials, particularly steel, this cost is today more likely to rise to Lm 65 million (€ 151 million).

[14] "A Proposal for an Energy Policy for Malta" : text available in English on the national regulator's (Malta Resources Authority) website : http://www.mra.org.mt/energy_policy.shtml; page 35-36

CONCLUSION

The Maltese energy market is not integrated into EU. The island is not supplied with natural gas, and its electric network is not connected with any other Member State, which determined Malta derogation from most of the provisions of the EU electricity directive. The Market is too small to raise the interest of potential competitors and the incumbent still enjoys de facto, if not legal, monopoly.

Hungary

Main issues

- **Market opening and competition:** from 1 July 2004, every non-household electricity or gas consumer was considered to be an eligible consumer with an option to revert to regulated (public utility) market. However in practice the effective size of the unregulated market is much smaller that it should theoretically be. For gas, only 23 eligible customers are supplied in the competitive market. There are no functioning wholesale electricity or gas markets.

- **Regulatory authorities:** HEO fixes network access conditions, and handles complaints and appeals (within 60 days[15]: 1393 in 2003), establishes rules for pricing and prepares the tariffs, but the Ministry approves tariffs ex-ante. It approves Operating, Business and Distribution Codes (collectively referred to as the "Electricity Supply Codes"), grants licences for establishment and operation of power plants with capacity of 50 MW or more. In co-operation with the General Inspectorate for Consumer Protection, it monitors supply and demand order to ensure security of supply and supports the Government in drafting legislation. HEO's independence from the Government is questionable, as shows the decision to revoke the previous chairman in 2003 without notice, by changing the law. Its financial and human resources seem to be adequate, but the Government plans to curtail them. The regulator has no competence for cross-border issues.

- **Unbundling:** Electricity and gas TSOs are legally unbundled, DSOs are functionally and accounting-wise unbundled.

- **Transparency of the market:** in both electricity and gas market a regulated sector co-exists alongside a liberalised one. The arrangement is transparent. The Hungarian regulator, together with those of some neighbouring countries, is committed to develop a regional electricity exchange.

- **EU integration**: interconnection capacities are substantial, but nevertheless insufficient. The TSO is pursuing a network upgrading plan. Interconnection capacity is auctioned, but some old import contracts still enjoy priority.

- **Public service obligations:** all households are entitled to subsidised tariffs, irrespective of their economic conditions. These subsidies have a significant impact on public finances and allegedly discourage serious energy saving efforts.

Overview on regulatory framework[16]

ELECTRICITY

The process of liberalisation of the former monopolistic power sector held by the Hungarian state started in 1992, when the formerly monolithic electricity body was split into independent power plant and distribution companies, and Hungarian Power Companies Limited (Magyar

[15] As amended by new electricity law, § 5

[16] The following text refers only to the most important legislative measures: in its website the Hungarian regulator lists 13 Acts, 17 Governmental Decrees, 47 Ministerial Decrees and 5 other legislative measures.

Villamos Művek ZRt. - MVM) became the transmission company. The 1994 Electricity Act[17] established the Hungarian Energy Office (HEO), the national energy regulator, and started a process of privatisation and of gradual introduction of prices set at such levels so as to enable companies in the electricity sector to finance themselves.

Act CX of 2001 (the base Law), which came into force on 1 January 2003 changed the regulatory framework, which was further modified by Act LXXIX of 2005, to make it compliant with the second electricity Directive 2003/54/EC. Act CX is completed by an enforcement decree[18], which has in turn be amended in 2005[19]. This process is still ongoing: the current regulatory framework is still not compliant with the EU legislation[20] and the HEO has published a proposal[21] to achieve such compliance.

GAS

The process of liberalisation of the former monopolistic power sector held by the Hungarian state started in 1991, when Act XVI on Concessions split the formerly monolithic Crude Oil and Gas Industrial Trust (Országos Köolaj és Gázipari Tröszt) into the Hungarian Oil and Gas Company (Magyar Olaj és Gázipari Rt. - MOL) and several regional distribution companies.

In 1993 Act XLVIII on Mining regulated the exploration for mineral resources, the use of certain storage facilities and the establishment and operation of transmission lines for hydrocarbons.

The Act XLII on the Supply of Gas (GET Act) is the most important piece of legislation. It regulates the sale of natural gas, biogas, gas from biomass and other types of gas, and the transport and distribution of these gases via pipelines. It includes provisions relating to the provision of services, the supply obligations of gas suppliers, the rights of the HEO, pipeline systems and the operation of the gas supply system. It was amended by Act LXIII of 2005 (July) in order to be fully compliant with the requirements of the Directive 2003/55/EC. The GET Act is completed by an enforcement decree, Government Decree No. 111/2003, which has in turn been amended by Government Decree No. 19/2006[22].

Description of the market

Electricity

Hungarian electricity market is relatively small: national consumption was 35,5 TWh in 2005. Hungary is also a net importer of electricity: in 2005 net imports were 6,2 TWh, representing 15% of domestic demand. The main participants in the markets are as follows:

• MVM, 100% State owned, is the key player. MVM owns and operates Paks nuclear power plant, the largest in the country. It buys the electricity produced by independent generators

[17] Act XLVIII of 1994 on the Production, Transportation and Distribution of Electric Power
[18] Government Decree 180/2002 (VIII.23) on the implementation of certain provisions of Act 2001 of CX on Electricity
[19] Government Decree 246/2005. (XI. 10.) on the amendment of Government Decree 180/2002. (VIII. 23.)
[20] See infringement procedure 2287/06/HU
[21] http://www.eh.gov.hu/home/html/index.asp?msid=1&sid=0&hkl=468&lng=2 Proposal on the new operational model of the electricity market (2nd version following public consultation)
[22] Government Decree No. 49/2006. (III. 10.) on the amendment to Government Decree No. 111/2003. (VII. 29.) on the implementation of certain provisions of Act XLII of 2003 on gas supply

under long term power purchase agreements, sells to public utility suppliers the electricity needed to supply the public utility customers, sells to DSO the electricity needed to offset the losses in the distribution network and buys the electricity generated by CHP and renewables, all of that at regulated prices. In addition MVM auctions to traders electricity in excess of public utility demand.

• The independent generators (the biggest are AES Borsodi Energetikai Kft., AES Tisza Erőmű Kft., Budapesti Erőmű Rt., Csepeli Áramtermelő Kft., Dunamenti Erőmű Rt., Mátrai Erőmű ZRt., Pannon Power Holding Rt., Bakonyi Erőmű Rt. and Vértesi Erőmű ZRt): all of them, except the last two, sell their electricity under long-term PPAs.

• MAVIR (100% owned by MVM and therefore public) is the national TSO. It owns and operates the transmission network and is responsible for ensuring its development and maintenance.

• There are 6 regional distribution companies in Hungary: Démász; Elmű, Émász, Dédász, Édász and Titász. The majority are held completely or partly by foreign companies.

• There are currently 29 electricity trader licence holders in Hungary: the principal are Árpad Energia Tanácsadó Kft, Atel Energia Tanácsadó Kft, D-Energia Kft., EFT Budapest Rt, ENERGY CAPITAL Kft, ENKER-TEAM Kft, Entrade Hungary Kft, E.ON Energiakereskedö Kft, and MVM Partner Rt[23]. and System Consulting Rt. Due to the high amount of electricity involved in the public utility sector traders suffer for lack of energy available: in 2005 only 11,4 TWh were sold to eligible customers.

Gas

Hungarian gas market is relatively small: national consumption was 14,7 bcm in 2005; domestic production was 2,9 bcm, imports 11,9 bcm. Domestic production is shrinking, and import will grow in the following years. All imported gas is Russian, although around 10% is sold in Baumgarten to French and German companies, which in turn re-sell to MOL, thus allowing a minimal contractual diversification. Natural gas represents 45% of Hungary's overall national energy consumption and 90% of the households' energy consumption. The main participants in the markets are as follows:

• **MOL Földgázszállitó Rt** (100% MOL group.) is the national gas TSO; owns and operates 5300 km of transmission network. Gas is imported through the pipelines called „Testvériség" (Brotherhood, from Russia through Ukraine) - maximum capacity is 42 MM m3/day (12 Million for transit purpose); and the HAG (Hungarian-Austrian Gas pipeline from Austria) - maximum capacity is 12.4 MM m3/day. Spare capacity only exists on the HAG pipeline.

• **MOL Földgázellátó Rt** (MOL Gas Supplier - E.ON Group) is a major player in both public utility wholesale and competitive trading of natural gas. It supplies the natural gas distribution companies operating under regulated conditions, major wholesale customers supplied from the high pressure transmission system and most of the major eligible industrial consumers served under ensure the conditions of the competitive natural gas market. In May it auctioned the first bcm of gas, according to the gas release plan.

[23] part of MVM Group.

• **MOL Földgáztároló Rt** (MOL Natural Gas Storage operator – E.ON Group) Operates five storage facilities with a total working capacity of 3,36 bcm, corresponding to around a quarter of the annual 14 billion national gas consumption.

• **Panrusgaz** (50% E.ON group, 50% Gazprom Group) a): in 2005 it sold 9 bcm in Hungary.

• The independent **traders**: pursuant to the licences issued by the HEO, traders may purchase gas from other gas traders, producers and from abroad, and may sell that gas to eligible consumers, the public utility wholesaler and other gas traders.

• The gas DSOs: there are six major regional companies: DDGÁZ Rt., DÉGÁZ Rt., ÉGÁZ Rt. KÖGÁZ Rt., TIGÁZ Rt. and FÕGÁZ Rt., - all of them are controlled by foreign energy companies except the last one, where local Budapest government holds a majority stake. In addition there are five smaller companies, with less than 100.000 customers.

Issues

Electricity

Functioning of the wholesale and retail markets

The Hungarian electricity sector, as it stands currently, envisages a clear division between a public utility (regulated) market and a competitive market.

In the competitive market, open to every non-domestic consumer, generators may sell any excess electricity capacity over and above that which they are obliged to supply to MVM to eligible consumers. Consumers in the competitive market are characterised as eligible consumers and, from 1 July 2004, every non-household consumer was considered to be an eligible consumer with an option to revert to being a public utility consumer. The price, at which electricity is traded between power plants and electricity traders, and between electricity traders and eligible consumers, is not fixed by the State.

In the public utility market, where the previous vertical operating structure was conserved, every consumer can be a public utility consumer having the right to universal service. Public purpose generators must offer their capacity to the State-owned public utility wholesaler, MVM. MVM must then supply the electricity through a regional supplier to the public utility consumers at the price set by the State. MVM has the exclusive right for satisfying the demands of the public utility consumers to sell electricity purchased for public utility purposes from power plants to public utility suppliers. Public utility suppliers have an exclusive right to supply electricity in a specified region for the public utility consumers.

In terms of size, potentially eligible customers, i.e. all non-domestic ones, represent 70% of the consumption; however only some of them did make use of this right. The share of electricity supplied in the competitive market passed from 16% at end-2003 to 20% at end-2004 to achieve 33% at end-2005. In other words, in terms of size, less than half of legally eligible customers are actually acting as such.

There are several reasons for this situation. In the ’90s, when the energy industry was privatised, the main concern of the government was to prepare attractive packages for (foreign) investors in order to maximise upfront income and foreign direct investment. Power plants were therefore sold bundled with long-term power purchase agreements (LT-PPAs), which guarantee a stable profit to the investors. Nowadays such LT-PPAs tie up most of the

electricity available in the country, leaving too little available to allow the development of a liquid and competitive market. The rising cost of electricity, presently higher than in neighbouring countries and the investigation presently in progress in DG COMP are putting increasing pressure on the government for a far reaching reform of the present LT-PPAs arrangements

HEO, the national energy regulator, is promoting its new market model[24], aimed to enhance competition to attract new consumers in the competitive market segment, but to date no formal proposal from the government has been submitted to the Parliament for discussion.

In May 2006, the Hungarian Competition Office (GVH) published a detailed report on the electricity market (available only in Hungarian). The main conclusions are:

- the current model (free market running parallel to regulated market) is unsatisfactory, not being able to increase for the benefit of the consumers; the free market is too small for its prices to influence the regulated ones: the opposite happens instead;

- the current model did bring some benefit when it was introduced, but is no longer adequate and should be changed, taking into account in particular the consumers' interests;

- the new model should be based on the assumption that through competition security of supply can be ensured in an easier and cheaper way; the obligation to transpose Directive 2003/54/EC represent a good opportunity.

• The large public balance deficit currently run by Hungarian treasury will encourage the government to streamline the sector and to reduce all unnecessary subsidies.

EU integration and trans-border electricity trade

Hungary is both a net import country and a transit country, therefore trans-border trade is massive, and transit flows put strain on national network. Presently there is a North to South flow, but if in the future Russia would be allowed to export substantial amounts of electricity to EU the pattern will towards an East to West one. Interconnection lines are often congested even if Hungary has a large capacity; on the other hand the very strong interconnection link with Ukraine is presently under-utilised.

Capacity is allocated by a system of yearly and daily auctions, on some borders held jointly with the other TSO. Existing long term import contracts have priority for capacity (about 600 MW) allocation, and do not pay any congestion charge, contrary to all other market players.

MAVIR, the Hungarian TSO, actively pursuits cooperation with neighbouring TSO, holding regular meeting within the framework of Central Eastern Europe initiative on congestion management, network development, security of supply, ancillary services. There are weekly conferences plus daily communications on current affairs. The aim is the establishment of an integrated regional electricity market, overcoming the problems resulting from the small size of the national markets. However lack of a deeper commitment of governments has limited the achievement to date.

[24] http://www.eh.gov.hu/home/html/index.asp?msid=1&sid=0&hkl=468&lng=2

Generation capacities

No substantial generation capacity has been commissioned recently. New additions were limited to small renewable plants, mainly wind and biomass. During the next fifteen years, however, almost 6000 MW of new power plant capacity will be needed, both to meet increasing demand and to replace 4500 MW to be decommissioned.

Building of infrastructure

The construction works of 400 kV transmission line Győr-Szombathely and the relevant substation of 400/120 kV Szombathely have been completed, ahead of schedule, on end-September. These two facilities enhanced the operational safety and increased cross-border capacity in the north of the country by 400MW to 1,400 MW.

Construction of 400 kV transmission line Szombathely-Hévíz; and of 400 kV tie line Békéscsaba-Nadab (Romania) is still in progress.

Gas

Functioning of the wholesale and retail markets

Like the electricity sector, Hungarian gas sector is divided into two parts. One segment is the public utility (regulated) sector, which supplies regulated customers. These are (i) automatically all non-eligible customers, plus (ii) all eligible customers who decide to remain, or return to the regulated sector. Eligible customers are free to switch back and forth from captive to competitive sector with no significant cost. Presently Hungarian Energy Office reports that only 52 customers have actually switched into the competitive market versus a potential number of around 180.000, potentially representing 70% of the market. In 2005 the public utility market represented instead almost 92% of domestic consumption.

In the regulated sector the public utility wholesaler (MOL/E.ON) obtains the gas from domestic production and imports, and sells it to public utility suppliers at a regulated price, who re-sell it to regulated customers also at a regulated price. MOL/E.ON enjoys legal monopoly to supply the public utility suppliers supplying regulated customers. The prices for the supply, distribution, public utility storage, trade between the public utility wholesaler and public utility suppliers and sale to public utility consumers of gas are fixed by the State (the HEO makes fee and pricing recommendations and the Ministry then fixes the price in a Decree).

The other segment is the competitive sector, supplying eligible customers who chose to enter it. They purchase gas from domestic producers, traders, or import it. They (and traders) may have access to cross-border pipelines capacity. Distributors can be active in both regulated and free market without need to establish legally separated company.

Until 2005 the gas market in Hungary has been dominated by MOL Group, whose operational companies were responsible for storage, foreign trade, domestic production transmission, system operation and the direct supply of hydrocarbons to major industrial consumers. Then most gas business activities of MOL were sold to E.ON Ruhrgas, which later re-sold part of these activities to Gazprom Group. The strong dominant position of the MOL group has been transformed in a joint dominance of E.ON and Gazprom groups.

• There are few prospects for change in the short term. The market development is hampered by the lack of gas available to the free market. Gazprom is in practice the sole supplier. Import pipelines are contractually congested.

• Although there are currently 14 licensed gas traders in the Hungarian market, to date only one, EMFESZ, has supplied significant amount of gas. It started operating in 2004 and currently sells 3 bcm out a free market of 3,2. It is not interested to customers consuming less than 1 mcm/year, because of administrative costs. Most contracts have the formula "regulated price minus discount".

• Many are stakeholders are pessimist about the future evolution of the energy market: some large electricity consumers are considering building their own power plants, which will be coal-fired, thus indirectly expressing their lack of confidence in the national gas market.

• Despite the serious problems a positive evolution is possible: the introduction of the Entry/Exit system of tariffs is improving the efficiency in the use of import capacity.

• As per the electricity sector, the large public balance deficit currently run by Hungarian treasury will encourage the government to streamline the sector and to reduce all unnecessary subsidies

One new electricity supplier (D-Energia) is considering to reduce its activity or even to leave the Hungarian market.

Security of supply

Domestic production accounts for around 15% of consumption. All imported gas, i.e. 85% of national consumption, is Russian, and most of it is transported by a single pipeline "brotherhood'. In theory, the Hungary-Austria Gasleitung (HAG) pipeline, connecting Győr (Western Hungary) to Baumgarten in Austria, could help diversify imports. But even that only supplies Russian gas, and it is more expensive than that supplied directly (the gas go West crossing Slovakia and then comes back East – it is sold to GdF and E.ON and then re-sold to MOL, thus allowing a contractual, but not physical diversification.). Hungary could also connect to the gas pipeline which crosses Slovakia, but again, that would supply Russian gas.

In practice Hungarian gas security of supply is entrusted to the goodwill of Gazprom. The country was severely hit by the Russia-Ukraine gas crisis of January 2006, also because the share of natural gas in primary energy consumption is around 40%, second only to the Netherlands within the EU. More than a third of gas consumption goes in domestic heating where there is room for efficiency improvements. This would reduce winter peak demand with a clear benefit on security of supply. However the present tariff system, which subsidise household consumption is not conductive to such development. Medium-term strategy will involve upgrading the existing infrastructures (see below).

Infrastructure

In order to reduce import dependence, Hungary needs to increase storage capacity. Legislation requires the building of 1.2 billion cubic meters of strategic storage in Hungary as an addition to the existing 3.4 billion cubic meter capacity, which is only sufficient for operational purposes. Hungary will take part in the building of the Nabucco pipeline, which would bring natural gas from the Caspian Sea region to Europe, and in the construction of a

LNG terminal on the island of Krk, Croatia, to be connected to the Hungarian grid by a pipeline.

Upgrading of the "Brotherhood" pipeline is also planned, as well as new interconnectors with Romania, Slovakia and Croatia.

Powers of regulator

The Hungarian Energy Office is the general supervisory body for the electricity, gas and district heating markets. It issues the licences for wholesale, supply, storage, transmission etc (and further licences in the future), supervises the operation of the market players, approves the terms of business thereof, examines consumer complaints, prepares regulated tariffs (which are approved by the Government), may suspend or withdraw licences, and may inspect confidential documents. Moreover, the HEO is invested with the right to enforce consumer protection.

The Office is a national, public administration body with independent powers and competence, acting under the Government's control and the supervision of the Minister of Economy and Transport. The Office is a budgetary corporate body with separate and independent financial management. The Office is self-financing.

At the proposal of the Minister, the Prime Minister appoints and dismisses the President and the Vice-President of the Office. Their appointment is for a term of six years.

The director of the HEO reports on an annual basis to the Parliament on the activities of the HEO. Decisions of the HEO may be challenged in court. The court is entitled to amend resolutions of the HEO. Such court decisions may in turn be appealed to the Supreme Court.

CONCLUSION

The Hungarian market suffers from several problems which hamper its route towards a fully competitive status. Late transposition of the Directives together with low regulated tariffs seem to have been detrimental to investment by existing or potential new entrants; the existence of long term power purchase agreements and the heavy dependence from Russian gas prevent the development of a liquid market. Only a fraction of the eligible customers are actually supplied in the competitive market.

An increase in electric interconnection capacity with neighbouring countries as well as new gas supply routes, such as the "Nabucco" pipeline or the planned LNG terminal in Croatia seem indispensable to increase competition.

NETHERLANDS

Main issues

Market opening and competition

Competition for end-users in the Netherlands is functioning rather well, as is shown by the fact that the difference between wholesale and end-user prices is relatively low. In gas the incumbent's position is still largely unchallenged due to its strong position in terms of production and flexibility, although ownership unbundling of the TSO has improved the level of competition.

Regulatory Authorities

The Regulatory authority is strong as it is part of the competition authority. It plays an important role in market integration with neighbouring countries. Many of the issues for further market integration are beyond its powers and would need a European approach. Concerning gas, more cooperation is needed with the TSO and the goverment to improve the investment procedures.

Unbundling

Access to customers and switching procedures are in place, but new entrants suspect that cross-subsidies between supply and distribution networks continue to exist. DSO ownership unbundling was proposed by the government but the Senate has modified the proposal, stating that ownership unbundling will only come into force when, among others, a Regulation is proposed by the European Commission obliging it. The electricity and gas TSOs have been subject to ownership unbundling and own transmission assets.

Transparency of the market

Market information in electricity is not equally available; especially parties without generation have less access to information. Improvements are being worked on by the regulator and the TSO. The wholesale market for gas is illiquid although the Dutch hub (TTF) is developing and the government intends to take measures to increase its liquidity.

EU Integration

The Netherlands face many issues that need more EU coordination for TSO's as well as regulators. Capacity optimisation and loop and transit flows all call for an integrated approach on a EU-level, for electricity as well as for gas.

Public Service Obligations

PSO's exist in the Netherlands but do not concern price regulation. DTe has the possibility to take measures against unreasonable tariffs of suppliers but this has not happened so far.

Overview on the regulatory framework

Implementation of Directives and Regulations

The Directives concerning the internal market for electricity and gas have been transposed, and no infringement case was launched against the Netherlands in this respect. The Court Rule C-17/03, which abandoned the preferential access to interconnectors of utilities that formed part of the pre-liberalisation cooperation called SEP, has been implemented in practice. The law will be changed as soon as there is an appropriate occasion.

The Dutch regulator DTe is part of NMA (the Dutch competition authorities). The DTe has authority on competition and on the approval of tariffs based on revenue-regulation through WACC (weighted average cost of capital).

The TSO's for both electricity and gas are ownership unbundled and state owned. Gas Transport Services was separated from Gasunie, as Gasunie Trade & Supply was simultaneously created. Tennet is the electricity grid operator. APX, the short term trading exchange for gas and electricity (which is also active in the UK and in Zeebrugge) is partially owned by Tennet (74,5%) and partially by GTS (25,5%).

The Dutch government has made a legislative proposal to establish DSO ownership unbundling. This law was heavily opposed by the incumbents. The initial law that proposed strict ownership unbundling has been modified and now ownership unbundling will only come into force when, among others, a Regulation is proposed by the European Commission that obliges ownership unbundling. In individual cases ownership unbundling can also be enforced when public and independent network operations are endangered.

Current actions

The Dutch government has been a promoter of regional market integration, and has set up with neighbouring Member States the Pentalateral initiative (together with Belgium, France, Germany and Luxembourg). At the same time the regulators in the area are working on the development of the Central West European Regional Energy Market. Therefore it seems market integration is being worked on at three levels: the governmental level, regulator-level, and TSO-level.

To improve the functioning of the gas market, DTe has developed a new grid code, with provisions on transparency, balancing etcetera (see further chapter 0).

Description of the market

Electricity

Netherlands is a net importer of electricity, and prices are higher than in neighbouring countries, mainly due to the fact that the Dutch generation capacity is for a large part gas-fueled, while Germany has mainly coal and France nuclear power.

Switching rates are satisfactory, there is active competition for end-consumers including households in the Netherlands. Billing of customers was a big problem for the energy companies because of unbundling of network and supply, but DTe has fiercely monitored this and it has improved considerably over the last years.

The four largest producers of electricity in the Netherlands are Electrabel, EON Benelux, Essent and Nuon. Together they manage 65% of the installed capacity in the Netherlands. For the rest, a large part of the generation capacity is in Combined Heat Power and decentralised production.

Besides the four big producers, there are a lot of smaller companies active in the market. Some of them are resellers with network activities, who have not been merged into larger companies with generation, and some of them are new entrants who operate without a network or production. Some of these new entrants are considering however to construct their own generation capacity. Preceding the new law for ownership unbundling of the distribution network from supply activities, numerous takeovers have taken place in the Netherlands, mainly concerning the local supply and distribution companies. For instance, RWE has taken over the regional utilities in Helmond (Obragas) and Haarlem (Haarlemmermeergas), EON has taken over NRE Energy in Eindhoven and DONG has taken over Intergas which is based in Breda. Most recently, Electrabel, which was only a producer and supplier of industrial customers, has taken over the supply-branch of Rendo and Cogas, two regional suppliers in the Northeast of the Netherlands, with the goal to enter the retail business in the Netherlands.

Maximal transport capacity for import or export of electricity is 3650 MW, of which maximally 3350 is available to the market. This capacity is auctioned in yearly, monthly and daily auctions. The TSOs of the Netherlands, Belgium and France are currently working to integrate the three markets by allowing for implicit auctions for the day-ahead market (see further chapter 0).

Gas

The Netherlands is a gas producing country, and produces around 80 bcm per year. Of this, roughly half is exported and half is for national consumption.

The largest gas production field in the Netherlands is the Groningen field, which produces L-gas. Besides this field there are numerous smaller fields in the Netherlands (a lot of which are off-shore). The production of the fields is done by numerous companies. NAM, which is a subsidiary of Shell (25%), Exxon-Mobile (25%) and the Dutch government (50%), owns the concession for the Groningen field: the gas is sold to GasTerra. In order to guarantee exploitation of these fields the Netherlands maintain a ‘small-fields policy’. This sets a cap to the production from the Groningen field, and promotes production from the small fields which have higher costs. The production from the Groningen field is very flexible and provides important flexibility in supply contracts within the Netherlands and other European countries.

However, the production level of L-gas is decreasing, and especially for export GasTerra is already working towards a phasing out of L-gas together with gas companies in Belgium and France.

For gas, GasTerra has a powerful position and supplies the largest part of the Dutch market. This is done either through direct supply to large industrial customers, or through reselling activities whereby it is sold to other suppliers who supply their customers.

Gas and electricity trading in the Netherlands occurs Over-The-Counter and on the exchanges APX (day-ahead) and Endex. TTF (Title Transfer Facility) is the virtual gas-hub where most of the gas-trading takes place.

New developments

There are a lot of plans and rumours on new investments in the Netherlands in the energy market. For generation capacity, all large companies have investment plans, either for gas-

fueled plants or for combined coal-biomass plants. Some of these are to replace old generation but there is also considerable extension of generation capacity planned.

Concerning storage, there are some utilities with investment plans in the Netherlands, but there are also Dutch utilities who have contracted or invested in storage capacity in Germany close to the Dutch border, and connected this storage with a direct line to the Netherlands.

For LNG-terminals, there are at least three parties who are investigating investing in a terminal, which are the Eemsharbour (ConocoPhillips and Essent, expected operation 2010) and two in the Rotterdam harbour (GTS with Vopak, 4-Gas which is a subsidiary of Petroplus), for all of which exemption from TPA according to Article 22 of Directive 2003/55 is sought.

There are also numerous concrete investment plans for connection with other markets. The BBL gas-pipeline between the UK and the Netherlands is planned to be operational from December 2006. Concerning electricity, there are two important investments planned, one of which is the Norned cable, for transmission from Norway (700 MW) that is planned to be commercialised through intra day implicit auction. This will create market coupling with Nordpool. There is also a Britned cable planned, connecting the UK to the Dutch grid.

Issues

General

Smart metering and the market model

The set-up of the system for allocation and reconciliation of metered data is very complicated. This causes delay in the confirmation of allocations. The metering market is free in the Netherlands, and a company has been formed that functions as an intermediate between market parties to gather all metering data and then distribute them. However the industry and the regulator seem to agree that a new market model is needed, and implementation is now being discussed. By applying a capacity tariff for network use, instead of a tariff based on consumption, it simplify the process of allocation, reconciliation and thus billing. This would enhance simplicity of the administrative process since the DSO's would not need the metering data anymore. The plan is to install smart metering at the same time in households, which is made easier since the DSO's are not involved in metering anymore. This would enhance competition in this market segment, enabling competition for services not only prices. It would also reduce the level of competition on the metering market.

European oligopoly

The Dutch government is afraid of an oligopolistic structure in the European market. Mergers in now separated markets create new entrants in separated markets, but they also help to create large pan-European companies in the future. This fear is especially relevant in the Netherlands were, following the new law for ownership unbundling of distribution networks and supply activities, various supply businesses are or plan to be privatised. Large utilities in neighbouring countries who are candidates for take-overs, are now new entrants but in future, following the market integration that is being promoted in the Northwest of Europe, it might help to create a few large European companies. This concern has also been raised before proposing the new law on ownership unbundling, but it has not been a reason to stop this process. The integrated utilities in the Netherlands were inhibited from privatisation, so they

could not participate in the European restructuring process, and therefore measures were needed in order to make this possible. Instead, the Dutch government now strongly emphasises a level playing field in Europe, based on ownership unbundling for transport and distribution activities.

Electricity

High wholesale prices in the Netherlands compared to neighbouring countries

The wholesale market in the Netherlands is very expensive compared to neighbouring countries. This is due to the fact that a large part of the generation capacity (including part of the baseload capacity) is gas-fueled and gas is expensive. At the same time, recent reports have shown that end-user prices are much lower than in Germany or Belgium. Since competition for end-users is well-developed in the Netherlands compared to these countries, this is a clear indication that competition leads to lower prices.

To lower the wholesale price, making more import capacity available is a solution. This is not the same as building more import capacity, since currently there is a lot more available than can be used, due to security issues. Better cooperation between TSOs to determine the available import capacity exchanging more information should solve this problem partly. Rumour is that the German integated companies to which the TSOs belong have an interest in having little import capacity available to the Netherlands, since they also have stakes in the Dutch electricity market. Part of the solution is to be found in Germany, as investments should be made in the German grid. The large wind generation capacity causes loop flows entering the Netherlands in the north and flowing back to Germany in the south, because the grid capacity from north to south in Germany is too low to allow this electricity to flow through the German grid. According to Dutch stakeholders, this investment in Germany is slowed down due to the fact that two TSO's involved (RWE and EON) do not cooperate effectively, and due to the fact that investments are heavily contested by the environmental organisations who object new cables. Another possibility would be to coordinate more efficiently the management of the wind-generation, by allowing the possibility to disconnect the wind generation when necessary. This however is heavily opposed by the German ministry of environment.

Unequal access to information

The access to information is not evenly distributed. Suppliers with no generation capacity have less knowledge about the market, since generators see what Tennet is doing to maintain the balance in the system, and they are also able to adjust their load to this. Without generation capacity, suppliers also have difficulties closing their position intra-day even if they know what their position will be, since there is no anonymous market where they can buy electricity.

The Ministry of Economic Affairs of the Netherlands and the DTe is closely monitoring, also through the international cooperation initiatives like the pentalateral forum, the transparency concerning production and cross-border trade that the TSO's are establishing, and if their progress is not satisfactory they will try to establish new laws, but this has to be coordinated between the countries to be effective. On the other hand the TSO claims that it needs regulatory backing to establish transparency in this sense, to force generators to cooperate. This regulatory backing needs to be coordinated however on a regional level, since it can have

adverse effects if connected markets implement it differently. Therefore the Ministry of Economic Affairs works on it in the pentalateral forum.

The APX has recently started (anonymous) intra-day trading. This should help especially smaller parties, who were until now not really able to trade intra-day. Their volumes where too small for the large generators, and the trades always took place through brokers, showing the vulnerable position of these parties being out of balance.

Market coupling

Market coupling is being expected to be operational in the fourth quarter of 2006. The TSO's are working on this but the regulators had concerns a.o. with respect to control of parties operating in more than one of the markets, since the regulators have only the authority to regulate nationally and not exchange confidential data with other regulators. They have asked for a change in the law, but at the same time have proposed a way forward by letting the different exchanges formally agree on making the data available to all three regulators involved when asked for.

Intra-day trade and balancing integration between these countries is also being worked on. Some concerns have been raised by the TSO which mainly concerns gaming, for instance when a party makes an imbalance volume shift from one to the other market, taking speculative positions in the imbalance market, due to different balancing regimes or different balancing prices. There are however possibilities to avoid this and they are currently being investigated by the TSO's. The roadmap states that cross-border intra-day trade should be implemented by the 1st of January 2007.

The issues on market coupling show that there is a need for overall regulatory coordination to facilitate market coupling, and that balancing harmonisation is a very important aspect in market coupling.

Cross-subsidies

Some companies claim that cross-subsidies exist between supply and the distribution network operation. This however should end with the ownership unbundling of distribution from supply and generation activities.

Gas

Congestion management

GTS uses the First-Come-First-Served (fcfs) method to allocate capacity. The fcfs was proposed by GTS in the Gas Conditions. However, recently DTe changed it so that reservations have to be made by GTS for domestic exits. The outcome of these Gas Conditions is still pending.

Although capacity is sometimes sold out very fast, GTS considers fcfs as the best system. They state that in a pro-rata method everybody will over-subscribe and auctions will lead to speculative behaviour, as well as favouring parties with easier access to capital.

To secure effective use of capacities by market parties GTS has a system in place at domestic exit points that avoids hoarding of capacities. This system allows all shippers to book up to the maximum available firm capacity at a certain domestic exit point securing the off take for

the party connected to the GTS grid. On border points GTS offers interruptible capacity to the market on a yearly, monthly and daily basis and after firm capacity is sold out. The maximum amount of interruptible capacity to be sold is determined based on historical data. The capacity offered and the chance of interruption is based on historical flows and the load duration curve. Besides this, GTS applies a Use-It-Or-Lose-It principle which means that parties not using their booked capacities for a period of time must return it to GTS.

At present the Dutch system has quite a number of interconnection points congested, both cross-border entry points as well as some of the cross-border exit points. This hinders development of the TTF as parties that want to bring gas from the border to the TTF or buy gas at the TTF and bring it to the border, can not buy capacities at some cross-border points.

According to the DTe, not all of the capacity is physically congested, but there is also a considerable amount of contractual congestion. They state that the transmission network seems to be used sub-optimally as on average only about 60% of entry capacity and 50% of exit capacity are used in practice. They blame it on an ineffective UIOLI policy, an underdeveloped secondary market for capacity, and a relatively high price for interruptible flows. This calculation of capacity use seems to be an over-simplification, since it does not distinguish between different hours of the day (for instance peak and off-peak) or different zones in the Netherlands.

The UIOLI principle currently used is hard to manage in practice, since it is difficult to prove that parties do not use (parts of) their capacity. According to market parties and DTe the system of UIOLI currently used by GTS is too weak and does therefore not function properly. GTS argues that actually this UIOLI mechanism is not necessary since the TSO optimises the network use by offering interruptible capacity not based on nominations but on historical flows.

To be able to secure their own exit capacity GTS offers the possibility to consumers that are directly connected to the GTS grid, to contract exit capacity without having some of the rights and duties of a normal shipper (e.g. regarding balancing).

According to GTS the obligation to reserve exit and transport capacity for domestic end-users, as it is proposed by DTe in the new Gas Conditions, is impossible to realise in practice, since transport capacity is dynamic and cannot be reserved in an entry-exit system. Besides that it forces the TSO to arbitrate between different clients and transit flows, and could cause problems for consumers in neighbouring transport systems and in fact is discrimination of end-users on a European level.

Investment & transportation tariffs

According to some supply companies, investment in capacity is too slow, partly due to the open season procedure that takes too long. Parties argue that there is no need for lenghty procedures because a certain expression of interest combined with a vision on future flows should be sufficient for the TSO to invest in transportation capacity.

The lengthy process is mainly caused by the current system of regulation, which determines the revenues of the TSO based on the regulated asset base (the cost-plus methodology). To mitigate this regulatory risk the TSO needs the DTe to approve on inclusion of the planned investments on forehand. It is unclear whether the Regulator has the authority to assess investments beforehand. Therefore the DTe asks a lot of information before invesment, to

ensure approval of the investment afterwards, taking into account developments on the European gas markets, optimal investment location and size, and project risks. Considering that GTS is an ownership unbundled TSO, there is too little room for market functioning in investment. A regulator should regulate the tariffs, but not regulate the capacity. Therefore the government plans to change legislation to allow a more dynamic approach to investment by the TSO, taking into account that transport is a relatively small part of the energy cost to end-users. The focus of a regulator on transport and distribution tariffs is understandable since it is what they are accountable for, but a free market needs a certain degree of overcapacity to function. The costs of overcapacity should normally be offset by the benefits of a free market.

There is another problem caused by the cost-plus methodology to determine tariffs, namely loop flows in the transportation network. Tariffs in the Netherlands are apparently lower than in Germany, therefore it has become attractive for shippers in the west of Germany to use the Dutch grid. GTS argues that benchmarking is necessary for determining tariffs, in order to avoid loop flows between the Netherlands and Germany, due to the fact that gas-transport in this case is not a natural monopoly because pipelines are in competition. The DTe opposes this kind of solution as it states that this would be at high costs for all customers of GTS. They propose to differentiate tariffs based on either the presence of pipe-to-pipe competition, long run incremental costs pricing or market based allocation systems such as auctions. The situation is about to change as the minister has recognised the possibility of pipe-to-pipe competition on a European level, and he has stated that this needs to be taken into account when determining tariffs. This is still to be elaborated in practice.

Conversion of gas quality

Since the Netherlands has a system in which two different types of gas co-exist, namely H-gas and L-gas, there is the need for conversion capacity. This however is scarce and parties complain that is blocks the market. Conversion quality is not always physically scarce but at times only contractually scarce. The new grid code on gas issued by the DTe states that the costs of conversion should be 50% socialised, meaning that it will be integrated in the costs of transport. This should lead to a system where conversion quality does not need to be booked in advance. GTS opposes the socialisation of the costs since it means uneconomic use of conversion capacity, and prefers investment in physical conversion capacity that is paid for by the party using it.

Flexibility

In the Gas Act it is stated that if GasTerra has a dominant position in the flexibility market, GTS should offer also flexibility services. In 2005 it has been established that GasTerra has a dominant market position in flexibility, and that is why GTS offers flexibility products to the market.

To offer this flexibility product GTS has followed a tender procedure to acquire this flexibility in the market. The flexibility sold to the market now is flexibility that is not offered by GasTerra. This indicates that the measure taken does not promote the development of flexibility services in the market, because the party that has won the tender choose to offer the flexibility to GTS instead of directly to the market. Adding tasks to the TSO which should be offered by the market is in the end counterproductive. Other solutions, like a stronger growth of the TTF especially by increasing offer of flexible gas, are preferable. The Ministry is working on a Decree, including a market consultation, to enhance the growth of the TTF.

Balancing

The system for balancing at current is criticised by market participants for the following reasons:

The system is not market based: This is however not possible due to the low liquidity of TTF day-ahead, which could easily lead to market abuse. Improvement is being made since the TTF is part of a basket that determines the imbalance price. GTS want to make more use of TTF as the basis of balancing costs, but currently TTF is too illiquid to rely solely on.

Currently the balancing system is based on hourly, daily and aggregated hours imbalance. In case of an unbalance at the end of the day, GTS buys from the shipper or sells to the shipper the gas for the market price and the shippers pays a surcharge which is also the market price. For a cumulative overshoot the shipper pays a surcharge which equals the relevant gas price. For an hourly overshoot the shipper pays 15% of the relevant gas price as a surcharge for a shortage and 10% for an excess. The surcharge at the market price causes the imbalance price to be very high.

The balancing system is based on a t=t+2 system, meaning that the balance is the difference between what is inserted at 't' and what is extracted at 't+2'. This system is designed to optimise of the network (to enable maximal flexibility to be offered to shippers), based on the characteristics of operation of the Groningen field. Concerns are that this design is based on a static analysis and did not take into account that everybody will change the modus operandus due to the system, as is expected by certain shippers. In this system the load will be adjusted by the shipper to the past consumption instead of to forecasted consumption; this is the other way around. Since neighbouring countries maintain other balancing system, this can cause nomination problems for certain shippers. Therefore GTS offers also the possibility to operate under a t=t regime, but then the tolerance level for imbalance is lower. Although justified from the point of view of optimising the Dutch system, this does not enhance market integration with neighbouring countries.

The balancing regime is becoming more stringent in 2007 while the current system is supposedly working well. This is due to a flaw in the system that determined the ranges in 2005 and that is now being slowly removed by bringing down the ranges.

Besides that Dte has published a new grid code where also the balancing regime is to be changed. But at the time of writing it is not clear yet what the exact changes will be.

Position of GasTerra

GasTerra is the traditional supplier in the Dutch market. They have the exclusive right to market the gas that is produced in the Groningen field, and they supply 70% of the Dutch market, but they also export a lot of gas to other countries in Europe, like Belgium, France, Germany and Italy. The Groningen field allows them to offer great flexibility in their contracts. GasTerra has a very strong position in the Netherlands as it owns the major part of the flexibility available in the market. In principle they offer three different products to the Dutch market:

- back-to-back profile contracts (mainly for domestic consumption) for re-sellers to households;

- supply contracts for large industrial consumers that consist of a commodity and a capacity charge;

- forwards on TTF

GasTerra uSes as a methodology to price their gas in (re-sellers) contracts a method called the a-b-c method in which the price of gas-oil and fuel-oil is integrated. The price of gas is therefore indexed to these commodities. By changing the parameters a, b & c GasTerra is able to change the relation between the gas price and the other prices following for instance a change in the market situation.

GasTerra offers only a limited amount of gas at TTF, and month-forwards are the smallest products offered. They do not operate on the day-ahead market as they argue they would be too dominant.

As GasTerra is a powerful actor in the Dutch market, they have a strong bargaining position which is expressed in the contracts they offer. This is for example shown in the following:

The way the price is determined in the price formula, where GasTerra has the right to adapt the parameters to determine the gas price.

To re-sellers it offers either an exclusive contract (where GasTerra demands proof through accounting statements) or a non-exclusive contract with take-or-pay clauses and high fines on both sides of the balance. The last type of contract is also the type offered to large industrial customers.

Clients must reserve the maximum flexibility they need in a year, since fines are high when more flexibility is used. GasTerra does not allow buying parties to resell gas received at exit points (GOS) at TTF because they would trade the flexibility instruments of GasTerra. At the same time GasTerra does not offer flexible contracts, like forwards with duration shorter than a month, peak/off-peak contracts or options on TTF.

In a competitive market the buying parties would have more bargaining power, and there could be more trade-offs in the contracts between the price for the gas and purchased versus the ‘consumed’ flexibility in the contract.

Conclusion

General

The Dutch gas and electricity markets function reasonably well, and there is a lot of work going on to make further improvements. In general the problems identified by the market parties are being worked on both by the Ministry and the National Regulatory Authority. The TSO's are ownership unbundled which has greatly enhanced the functioning of the market, although in gas this is recent and roles still have to be defined better. This is realised and being worked on by the different parties as well as the ministry. The Netherlands are also planning to separate the ownership of the distribution network from production and supply, as they consider it the next necessary step to realise an efficient energy market.

Electricity

The Dutch market is one of the most liberalised in the EU. The most important issues the Netherlands face, like optimisation of cross-border capacities and market-coupling, can not be solved internally but should be solved on an international level. These issues clearly show the need for more TSO cooperation, where TSO's in neighbouring countries have the right incentives and are not bound by contradictory interests of the integrated mother company. It also shows the need for regulatory overview on cross-border issues to facilitate these processes and the need for a European approach to balancing. Therefore the Dutch government and regulators are very active in promoting international cooperation, for instance in the regional initiatives. They are also an important driver for action on a European level, and recognise that more governance is needed on an EU level.

Gas

More competition and flexibility is needed in the Dutch gas market. GasTerra has a very strong position which it exploits commercially. More competition could be created by freeing flexibility to the market or by increasing capacity on the borders so other European actors can enter the Dutch market and compete with GasTerra. This should also enhance liquidity on TTF, which will have positive effects on the balancing market. The Dutch government is considering measures to increase liquidity on TTF.

A key element is therefore capacity. The regulator states that the network is not used optimally and there is a lot of contractual congestion, while the TSO states that physical investment is the key. The system should be reviewed so that the market is allowed to function for capacity, while the regulator controls the tariffs. TSO and regulator should strive towards a common vision on what efficient use of capacity is and how the market for capacity should be developed, since their overall goal is the same.

The debate in the Netherlands on capacity investment, transit flows and balancing shows that there is the need for more cooperation on a European level. When transit flows are an important part of the transport through a TSO's system, there is a need for an integrated approach to investment and capacity utilisation on a European level. As in electricity, balancing is a key aspect in market integration, and a harmonised approach across borders is needed.

AUSTRIA

Main Issues

The **regulator** is disadvantaged by the weak enforcement powers that he is given, his inability to collect real-time data and the split of his competences with the federal states. **Regulatory control** is inhibited by a lack of positive duties to co-operate amongst the Austrian regulator and those of Austria's neighbours.

Investment in network capacity is virtually stopped internally by environmental concerns and on the borders appears to be kept deliberately low. Further transmission system operator co-operation is needed to address these issues.

Unbundling is frustrated at many levels by the structural conflicts of interests between owners and regulators, who are one and the same federal states.

Transparency in wholesale prices is difficult to assess. Reference prices on exchanges based outside Austria, but which are used within Austria for price formation, are the result of thin markets, congested interconnectors and low trading volumes.

Public service issues were not raised as a concern.

Overview of Regulatory Framework

Transposition

The Austrian authorities have transposed the electricity and gas directives by a series of measures. Whilst there may be concerns *in the details*, the major issues have been dealt with[25].

Necessary Regulatory Powers

Austria has dispersed the competences that may be given to a regulator amongst several authorities, making each of them weaker than they should be and in addition leading directly to conflicts of interest within some authorities.

All competences could be brought under the authority of the national regulators (E-Control) and E-Control could be given direct enforcement powers, including the ability to impose graduated fines.

The most prominent example is supervision and enforcement of unbundling in electricity distribution, where regional governments are competent. The regional governments also are majority share holders of the biggest retail & distribution companies, which directly leads to conflicts of interest. A transfer of powers to the independent national regulator would lead to a standard unbundling regime in electricity as well as gas.

[25] The Commission will undertake a full legislative review of Austria in early 2007.

Example:

E-Control found that Energie Ried, a municipal electricity company, discriminated against third suppliers by not providing invoices which can be used for tax refund (VAT) purposes. This led to additional transaction costs for alternative suppliers. E-Control had the power to intervene on the policy but not to enforce. E-Control was vindicated in the administrative court. Energie Ried declared that they are prepared to issue adequate invoices based on contracts which are to be concluded individually for every customer. Effectively they still discriminate.

E-Control has the power to intervene. However enforcement of a decision has to be done by regional administrative authorities, and in this case enforcement has not happened;

E-Control is not able to sanction discrimination by issuing fines.

Financial sanctions are possible but these are to be imposed by regional administrative authorities, which may own the companies that ought to be fined.

Example:

Concerning market monitoring, the present situation is not satisfactory. Data collection is handled as a mere statistical task by E-Control and other authorities. Data collection can not be undertaken for the pro-active pursuit of anti-competitive behaviour and there is no compulsory power to force the provision of data. The national and regional regulatory powers are frustrated by a lack of data. In electricity, real-time generation data is prevented form becoming public because of data protection laws. This hampers not only the regulator but also TSOs, and we consider that this should be remedied.

E-Control must be given the power to compulsorily force the provision of data.

Positive Comity (Cross-Border regulatory co-operation)

Enforcement in cross border issues is also critical to guarantee market opening in Austria. This is especially relevant in natural gas where the western states (Tyrol, Vorarlberg) are physically only connected to Germany. Competition therefore depends on the possibility to get fair access to the German gas grid. When the Austrian regulator has information on discriminatory behaviour in the German grid, the regulator has only the possibility to forward the case to the German regulator or competition authority without any right to collect information, to launch an investigation or to stop discrimination.

In such cases it seems necessary to establish a right to request cooperation and action of the competent authority of the Member State where the alleged discriminatory behaviour exists (a positive comity power).

Market Issues

Electricity

Control Zones & TSO Integration

The fact that Austria is divided into three (system) zones is unfortunate and the concern remains that this is done entirely to frustrate market integration and competition rather than because of any objective physical necessity.

The market would benefit if Austrian authorities resolved this in favour of one zone.

The issue would resolve itself if the TSOs were able to follow the market incentives that should be available to 'pure' TSOs rather than be influenced by related companies.

Therefore, an alternative to forced zonal consolidation is to ownership unbundle all TSOs.

Distribution System operators

Austrian DSOs are often the legacy supplier as well as being the local net operator and this situation may be the origin of the ability of Austrian supply companies as a whole to pass through costs, even at a mark-up, when input prices increase. Small consumers are 'sticky'. Another explanation could be the search and transaction costs associated with switching. The reputation aspects – of legacy suppliers - cannot be ignored either.

Whatever the cause, all three issues ought to be addressed and E-Control be given the powers and remedies necessary for resolving the situation.

On the other hand, large customers, for whom the search and transaction costs would be a smaller concern, are retained by a form of limit pricing which might also entail cross-subsidy from small to large consumers. Once again, the issue ought to be addressed and E-Control should be given the powers and remedies necessary for resolving the situation.

Imbalance charges

Imbalance charging is a challenge for market entrants. The stochastic (unpredictable) nature of imbalance charging – whereby charges are levied on the basis of group behaviour rather than individual responsibility – seems to act as a significant cost variable (even if the charges in question in themselves seem not to be unreasonable). However, there is no principled problem with this and the issue is under the constant review of E-Control.

Price Elements

A common concern raised in the Austrian context is the difficulty to understand the (end-user) pricing system. Even when attempts have been made to bring transparency to this, general retail law has intervened to occlude the first steps to transparency. Thus a company that breaks down its prices can face censure for having done so. This conflict between the general retail laws and the transparency of the retail energy market needs to be resolved (and preferably in favour of transparency).

Another concern that is more hidden though evident is the use of fidelity rebates and these ought to be investigated under the general provisions of competition law (also true of gas).

Infrastructure

A feature of modern Austrian electricity politics is the ongoing struggle to build more internal capacity for transmission. This issues more than cross-border supply prevents the development of electricity trade. However, this is an entirely internal matter.

Gas

There is a widely held belief that the dominant position of OMV- and its daughter company ECONGAS - remains the major obstacle to increasing competition in the gas market. However, there is another perspective that OMV is constrained from being an actively competitive player in other neighbouring markets by the exclusive competitive behaviour the neighbouring dominant players and the weaknesses of the neighbouring regulatory regimes.

There needs to be strengthening of the core functions of regulators and a more active co-operation amongst regulators so that **all** companies can benefit from geographic commercial diversification. This comment is particularly pertinent to the behaviour of the dominant companies in Italy and Germany.

Unbundling

On unbundling E-Control notes that the unbundling regime, whilst legally in place, is not followed in the spirit in which it was intended.

However, to maintain the spirit of the unbundling regime might create strongly interventionist and extremely prescriptive regulation in the view of many players.

It will always be difficult to regulate the *minutiae* of the unbundling regime and that it will cause ongoing friction. The solution could lie in full ownership unbundling, if the companies involved are not prepared to tolerate costly and onerous direct intervention in their activities.

Storage

The storage market is not developed and the two operators, OMV and RAG, are not amongst the most active companies in conforming to their obligations under relevant Austrian and EU norms. We would like E-Control to be more active in this area.

Transit & Transport

Austria hosts gas transit flows though the regulatory framework appears opaque. The residual belief that there is some special transit regime that applies to gas was prevalent and that it may be concerted action by companies based outside Austria that creates this situation. There does not seem to be any general or specific rules that would allow a compartmentalised transit regime and in principle there should be no transit exceptions to any of the general rules in the Gas Directive or the Regulation.

Possible solutions could be:

E-Control be given the necessary power to investigate the situation within Austria.

That a general positive comity rule be introduced allowing E-Control to request co-operation in this area from the neighbouring regulators.

That a general rule in EU law be introduced that prevents unbundling rules being circumvented by multi-jurisdiction investments in supply, transmission and other gas activities.

The operation of the Trans Austria Gasleitung (TAG) pipeline is of particular concern.

On transport, the requirement of European regulations are not met with regard to the optimal use of transport capacity; this is consciously done for anti-competitive purposes.

E-Control could be given a specific power to obtain physical capacity utilisation figures from transit and transmission pipeline operators.

Conclusions

The regulator's powers must be enhanced and the federal states' powers reassessed, with a more rational division of competences, if this is thought necessary at all.

The regulator, supported by market participants, expresses the desire to have greater cooperation with neighbouring regulators to resolve the issues within Austria.

Unbundling in Austria does not work: only full separation of assets would create the right incentives to invest internally and on the borders.

POLAND

Main issues

Market opening and competition

In electricity, long-term contracts and regulated prices distort the market, and the market is illiquid and does not give proper investment signals. Balancing costs and restricted access for traders are important hindrances for new entrants. Competition over end-consumers is developing for electricity, but for gas the market is completely closed.

Regulatory Authorities

The regulator is not powerful enough. It seems that the division of tasks between regulator and government is not well defined. The regulator's control on tariffs is insufficient. The regulator has no competence for cross-border issues.

Unbundling of TSO and DSO

The electricity TSO seems not to be properly unbundled since its focus is not on efficient operation of the system and facilitation of the market, but on adapting its operations to the (inefficient) generation and transmission structure in Poland. DSOs have not been properly unbundled functionally and discriminate between their own supply-companies and new entrants. For legal unbundling the deadline in Poland is 1 July 2007.

Transparency of the market

For gas, no market exists, and for electricity the market is intransparent. The TSO does not give sufficient information on operation of the system, for example concerning balancing or outages.

EU Integration

The electricity TSO is cooperating with neighbouring TSO's to increase market integration, but unilateral actions (both on the Polish grid as on interconnection capacity) from the Polish TSO hinder this integration. More cross-border coordination and regulation is needed.

Public Service Obligations

Currently regulated prices for households exist for gas and electricity, but for electricity they will be abandoned and should be replaced by 1 July 2007 by the establishment of a supplier of last resort.

Overview on the regulatory framework

Transposition of directives

The relevant law in Poland is the Energy Law of 10 April 1997, that was amended several times to implement the relevant EU Directives. Poland has notified the legislation it has adopted to transpose all the relevant parts of the Directive 2003/54 and Directive 2003/55.

However, infraction procedures have been launched for electricity and gas for the following reasons:

Labelling of energy sources

Designation of the DSO's

Discrimination in access to interconnectors by the electricity TSO.

Communication to the Commission of the Public Service Obligations.

At the time of writing the Commission has received an answer and is working on the response.

Regulatory Authority

URE is the regulator in Poland, which was established under the Energy Law. Its competences changed considerably with the accession of Poland to the EU. The office cooperates with the Office for Protection of Competition and Customers, especially at elaborating reports on abuse of market power and violations of customer rights.

The URE does not have enough power to impose market functioning, it had for instance no saying in the consolidation plan by the polish government. Recently the Polish government has proposed a law that gives the government the authority to appoint and dismiss the president of URE, which is a step backwards in the creation of an independent regulator.

Unbundling

PSE Operator, the electricity TSO, is a separate company but owned by an incumbent. Ownership unbundling is supposed to happen with the new restructuring programme. For gas the TSO is already ownership unbundled. DSO unbundling has not happened at all, as will be discussed further down. Most DSOs form part of an integrated supply company without production capacity; Disco's as they are called in Poland.

Description of the market

Market players

The major companies on the electricity market in Poland are BOT and PKE, who together own around 45% of capacity. There are a lot of small electricity producers. Some foreign companies have entered the Polish market but they have little or no generation capacity. However, around 35% of generation plant is tied to contracts (Long-term Power Purchase Agreements) with PSE which, in the past, acted rather like a single buyer. However these contracts are being restructured at present, which should increase liquidity. The electricity wholesale market in Poland is a bilateral trading market, with brokered deals. There is also a power exchange, Gielda, although liquidity is low. In the supply market, the distribution companies are still dominant in their particular region although new traders are entering the market, often linked to one of the main generators.

The main energy source in Poland is Coal (around 60%) and Lignite (around 35%), of which the majority is produced domestically. Gas only accounts for a few percent of the generation.

Main exports are to the Czech republic, and less to Slovakia, Sweden and Germany. Main imports came from Germany, Belarus, and negligible amounts from the Czech republic, Slovakia and Sweden.

Competition in the Polish gas market is not functioning at present. Only one company, PGNiG, has access to the market and other avenues for gas transmission appear to be blocked in other Member States. Gas is a monopoly in Poland and restructuring is quite far away as the current focus is on the electricity sector (see below). Poland is largely dependent on Russian gas and an important transit country.

Network access

The URE sets a revenue cap for network companies with benchmarking of the 33 distribution companies using regression techniques. After consolidation of distribution companies the benchmarking was adapted to existing 14 companies. URE also monitors the network performance.

Network access to the gas system is a postage stamp system. Capacity is provided on a first come first served basis. There are considerable long term contracts for capacity rights. The big transit line that crosses Poland from East to West is operated by a separate company.

New investments

Investments in the electricity sector are lagging behind, which is one of the reasons why a restructuring plan has been created; see below.

Plans for investment in gas:

PGNiG has plans to participate in a pipeline from Norway to Sweden and take it to Poland. The Yamal II pipeline is more or less cancelled, also due to the fact that a pipeline is planned from Russia to Germany through the Baltic Sea.

PGNiG has plans to develop a LNG terminal. Plans are not concrete yet.

EMFESZ has plans to build a storage site in Poland. This is related to the fact that in order to supply customers storage is needed.

Restructuring programme of the Polish power sector

On the 27th of March the Polish Ministry of Economy has published a restructuring programme of the Polish power sector.

Identified problems

The most important problems identified in the document describing the restructuring programme (with respect to the functioning of the electricity market) are:

Long-term Power Purchase Agreements

The wholesale market is restricted by the LT PPAs. They introduce price distortions and are perceived by the EC as prohibited state aid. The question is under investigation. The current situation is that the Polish government and DG COMP have agreed on a compensation

mechanism for the cancellation of the PPAs. The PPAs will be cancelled voluntarily and the generators will receive compensation if they apply for the cancellation. The cancellation has been accepted by the generators that are in the restructuring scheme because, among others, this restructuring also serves them as a kind of compensation through gaining market strength. This is not the case for the independent/privatised generators (owned by for example EDF), and therefore EDF has challenged the preliminary decision of DG COMP. Companies that do not accept the voluntarily cancellation can be challenged in court to cancel the PPAs, and the more companies accept the agreement the weaker their position is.

Transmission and distribution costs

The high fees for the transmission and distribution of energy result from the principles adopted for tariff setting, the limited powers of the Chairman of the Energy Regulatory Authority in the area of tariff control, and an insufficient inventory of costs.

Price increase and need for investment in generation and transmission capacity

There is a need for new generation capacity as current capacity has to be replaced, and the power generators have to meet environmental standards of the EU. True price signals indicating the profitability of particular investments are lacking due to regulatThere are however too many administrative barriers and. The Polish transmission system still operates on the basis of an obsolete 220kV network system, with the investment in the 400 kV network significantly falling behind schedule. There is a need to enforce and expand the transmission and distribution network, particularly in rural areas. Also lacking are meaningfull schemes towards construction of cross-border interconnectors.

Flawed structure of the power sector resulting from incomplete consolidation processes;

In the past Polish power companies have been horizontally consolidated, which has not created sufficient strong companies. According to the Polish ministry this is contrary to the European trend of vertically integrating companies.

Proposed measures

Based on this analysis, the restructuring programme proposes the following measures:

Restructuring of the power sector

The basic assumption is that the LT-PPA's will be annulated. The main proposal is the creation of two large vertical companies that are supposed to compete with each other. One company is to be called Polska Grupa Energetyczna (PGE), and it will be formed from the largest Polish electricity producer, BOT, as well as PSE (after its TSO-part including assets is separated and becomes 100% owned by the State Treasury), Zespol Elektrowni Dolna Odra, Rzeeszowski Zaklad Energetyczny and distribution companies in the east of Poland. 35% of the shares of this company will be privatised. The other large player on the market formed will be a private company consisting of Poludniowy Koncern Energetyczyny (PKE), Elektrownia Stalowa Wola (power station) and the DSO's ENION and ENERGIA-PRO.

DSOs will become independent legal entities. Principles governing the operations of the DSOs will be completed before 1st July 2006 by the Minister for State Treasury and the Minister of Economy.

Besides that, privatisation or consolidation of ENEA, Kozienice Power Plant, Bogdanka Coal Mine, ENERGA, and ZE Ostroleka is also planned to be organised by the Ministry of State Treasury.

Changes to regulations

More powers shall be given to the regulator, so that he can a.o. review effectively changes in electricity prices, as well as transmission and distribution fees. The regulator shall also monitor TPA and identify barriers to consumer access.

Amendments shall be made to the Energy Law in order to limit the possibilities, on the part of network enterprises, to introduce barriers to access to the market by consumers by, inter alia, forcing the latter to install cost-measuring devices or imposing on them unjustified costs of balancing.

Development of infrastructure

Concrete measures to develop and optimise use of infrastructure are:

Extending interconnections with Germany;

Extending internal transmission lines in the Polish power system;

Commencing work on a 750 kV connection with the Ukraine to improve the security of operation of the Polish system;

Introducing a modified system of auctions for transmission capacities for cross-border connections, that includes coordinated auctions to maximise capacity, reallocate 50% of auction revenues for investment in interconnection level increase, and separating interconnection capacity auction from transmission tariffs

Issues

General

Lack of authority of URE

From conversations with different actors it seemed that the power of URE is not optimised. The cooperation with the Ministry of Economics seems not to be optimally developed, and there is a lack of initative to establish a well-functioning energy market in Poland. There seems to be a lack of designation of powers, as it is unclear who is in charge of guaranteeing management unbundling of the network operators. This is recognised by the Ministry of Economy and the new energy law should clarify the division of authority between the ministry and the regulator, while at the same time strengthen the position of the URE. This being said, at the same time a law has been put through parliament which states that the President of URE (as well as other regulatory bodies in Poland) will be nominated and dismissed by the Prime Minister. This changes from the old situation where the president of URE was appointed for a fixed term, and is clearly a deteriation of the independency of the regulator.

According to URE, all their actions are constrained to the extent that they must be 'on basis of the Act of law and in line with State Energy Policy', which causes that URE looks to the Ministry for guidance.

The URE has no good explanation for the differences in tariffs for distribution maintained by the DSOs, and the regulator claims also that it has no authority to control compliance with the acount unbundling provisions of the gas and electricity directives, as it states that additional legislation is needed from the Ministry of Finance. The Ministry does not agree and states that URE has sufficient powers to control network tariffs and account unbundling.

Electricity

Programme for the power sector

The programme has been created with the cooperation of the ministry by academics/engineers who are principal advisors to the ministry and who have consulted different ministries and trade unions. The Ministry of economy is responsible for energy security, and the Ministry of State Treasury owns all the companies at the moment. A steering committee has been created that consist of the Ministry of State Treasury, the Ministry of Finance, the Ministry of Economy, OCCP (the competition authority) and URE. The companies cannot be privatised easily as there is a lack of agreement with the Ministry of Finance concerning taxes and the unions or personnel have a right to a part of the shares in case of privatisation. Apparently restructuring has also a big influence on the loan agreements by banks, especially financing the operations of PSE.

Insufficient DSO Unbundling and discriminative behaviour

DSO unbundling has not happened yet at all, as most DSO's form part of supply companies without production capacity. Changes are envisaged in the power sector programme, but functional unbundling has not been established fully and/or properly yet. For legal unbundling the DSO's want to wait until after the restructuring of the power sector has taken place. This will mean that the deadline in the Directive will not be met. The proposal in the programme is to have DSO's with the assets as part of a holding. DSO's however are saying that it will be impossible to unbundle, since they do not have correct data on household consumption. This is due to the fact that they have no hourly metering and no agreed load profiles for households. DSO's also argue that customers who switch should install hourly meters so that the DSO knows the consumption. In theory DSO's should be neutral to whether clients are charged on the basis of load profiles or hourly metering. The underlying (market-blocking) argument is that integrated companies (DSO and supply) can aggregate the imbalances of individual customers in their own network, while other suppliers cannot. The association of DSO's argues that this is compulsory in the law, but this is denied by other parties who state that they are able to pool their imbalances in certain distribution networks.

It seems that there is no argument for DSOs to demand hourly meters for customers who switch, and the impossibility to aggregate imbalances for independent suppliers is discriminative behaviour and therefore not in line with the Directives 2003/54 and 2003/55.

Currently, DSOs have to submit their network code for approval to the Regulator, and this code has to be in line with the new transmission code that came into force on the 1st of June 2006, and the Energy law. The DSO's have however challenged the new transmission code in court. Only a few of the DSO-codes will be approved by the Regulator, but he states he will

nevertheless has the power to demand application of the grid code and Energy law in distribution contracts.

Regulated prices & market functioning

Currently, the wholesale market is distorted since 35% falls under LT PPA's. This number is decreasing however and supposed to be phased out. Most of the PPA's will be finished by 2016 although the last one is until 2027.

Due to a fear of high electricity prices relative to the purchasing power of households in Poland, regulated prices remain the case in Poland for households, while SME have the choice between free and regulated prices. At the moment 90% of the final consumption is purchased under regulated tariffs. Regulated prices will be abandoned by the 1st of January 2007 with a changed supplier of last resort arrangement. A Regulation has been created that defines the tender procedure to choose the supplier of last resort for electricity and gas, which will come into force in July 2007.

Currently the regulated prices distort the market. The end-user prices are too low and operating margins in the supply business are extremely low, which pushes the wholesale market prices down as well (the prices in the liberalised wholesale market are pushed down through subsidies from income of the long term PPA's and the balancing market). The prices in the wholesale market are therefore too low to promote investments that are needed and suppliers are squeezed between two pricing systems.

Besides that the regulator judges the tariffs on an integrated basis, and does not make a clear distinction between transport or distribution tariffs on one hand and electricity prices on the other hand. Therefore cross-subsidies exist that hinder competition.

The Exchange (Towarowa Gielda Energii S.A.) is not very liquid, and traders indicate that it is difficult to trade due to the high fixed and variable costs set by the exchange and the operational risk, caused by the lack of emergency procedures in case of scheduling errors by the exchange. Even on OTC-basis trading is difficult, since traders without physical assets (i.e. a customer base or generation capacity) are not allowed to nominate (their closed position). According to the TSO, PSE Operator, the risk of bankruptcy or imbalance is too high, but this causes inefficiencies in the market. In reality traders now operate through suppliers with a customer base. This is a case of insufficient unbundling: it should be left to market parties to ask guarantees from their trading partners, within the licenses given by the state, and it is not up to the TSO to demand these guarantees.

Balancing

Besides the problem for trade mentioned above, there is also a problem with rescheduling. Gate closure is at 12 pm the day before delivery, and there is no intra-day market, which leads to unnecessary high balancing costs. Besides that market participants complain that the balancing market is too costly and that the system is in-transparent. However the new grid code that is in place since 1 June 2006 has changed the balancing system, as it is now based on the highest bid accepted instead of the highest bid received. PSE Operator claims that gate closure does not need to be changed as the reactivity of coal plants corresponds to the current system. This argument does not take into account benefits from coordinating nomination schedules with neighbouring countries, or the difficulties for wind energy under the current procedure. In general it does not show a sufficient unbundling of the TSO since its focus is on

the needs of the Polish incumbent generators instead of on efficiency and facilitation of the market.

A relatively large part of the Polish generation capacity is producing under 'must-run' contracts for network safety. This reduces liquidity on the wholesale market, and this should be solved by changing the balancing and congestion management rules which in effect might lead to more investment in the network to reduce bottlenecks.

Electricity producers cannot pool their imbalance for different production sites, which creates unnecessary balancing costs. This however should also be improved with the coming into force of the new grid code.

Another issue for producers is connecting to the grid. A lot of permits have been given out, of which only a small percentage are actually realised. Therefore permits to connect have become limited and are now a tradable product, which is a hindrance for new producers.

Lack of cross-border authority and TSO cooperation

PSE Operator is cooperating closely with neighbouring countries to maximise the available import/export capacity to the market, and progress is being made in the establishment of coordinated auctions. Irregularities still occur however, as export capacity was cut down in July due to network problems in the Polish grid. Initially the Polish TSO purchased electricity in neighbouring countries but later decided to limit export capacity. This was done while no price increase was observed in the Polish market, and PSE Operator refused to pay compensations for companies who were not able to export their electricity. A few companies who were affected have complained with the TSO and with URE, who is currently investigating the matter.

This case shows that there is a regulatory gap in determining cross-border capacity, as the Polish TSO opted for the solution that was the cheapest for itself while the burden is paid by internationally operating producers and traders, and a more cost-effective approach on an international level would have been to continue purchasing the electricity in neighbouring countries.

Gas

No liberalisation and anti-competitive behaviour

The Polish have claimed not to liberalise their gas market until 2010. Their argument is that at the moment they are too dependent on Russian gas, and they first want to diversify the gas sources before they will open up their market to competition. Prices for gas in Poland are still regulated.

The only actor in the Polish market supplying gas is PGNiG, who has a monopoly. Since a few years a Hungarian company EMFESZ, with ties to Gazprom and RosUkrEnergo, is trying to enter the market. They claim to be blocked out of the market by PGNiG. The Polish gas law obliges any company supplying gas to Poland to have a storage capacity of 3% of the total annual volume of import on Polish territory. This blocks the market since all storage capacity is owned and needed (as they claim themselves but which is also doubted by other parties) by PGNiG itself. EMFESZ has now plans to build its own storage in Poland but this will take a few years.

Conclusion

General

The Polish regulator claims that they do not have enough competences to regulate the energy market. They depend on ordinances from the ministry and have too little competences in the field of tariff approval, according to themselves. The division of powers between the regulator and the ministry seems to be unclear. The recent law on the nomination and dismissal of the President of URE is a clear move towards less independence of URE and more political influence from the government.

If proper unbundling of the DSO's is given priority over the programme for the power sector, market functioning could be enhanced. If however priority is given to the restructuring process first, numerous problems will appear in Poland. First of all the provisions of the Directive, notably on unbundling, will not be met in time. Besides that the wholesale market will not develop since vertically integrated companies will emerge that have production capacity and a customer basis tied to unbundled DSOs. If this situation is maintained with the regulated tariffs, investment in new generation will not take off due to the fact that pricing will remain in-transparent.

Currently, DSOs are not unbundled and at the current pace they will not meet the deadline in the Directives of 1 July 2007 regardless of restructuring or not. Discussions are going on about exact ways to unbundle, and the discussions are troubled by irrelevant issues like whether facturation should be based on load profiles or hourly metering. DSO's are now integrated with trading and they do not want to give up their position.

Electricity

The restructuring programme could be seen as a protectionist measure, by creating two new big companies, but at least it is not one national champion so internally there is competition and the consolidated companies can compete outside of Poland.

The Regulated tariffs for electricity distort the market. Margins on generation capacity in the liberalised wholesale market are too low and this can lead to Security of Supply risks if investment lags behind, as the market is not allowed to communicate effective investment signals.

PSE Operator should accommodate the market more and act more transparently. Currently it interferes to much with the market itself and does not prove to be properly unbundled. The situation could improve with the coming into force of the new grid code, but problems remain, for instance the unilateral action of cutting down export in case of 'emergencies', the impossibility for traders to trade among themselves or the high percentage of 'must-run' plants. Investment in the transmission system is needed to enable more flexible operation of the system that will be beneficial to the market. The impression is that the TSO currently tries to avoid investment but instead adopts the operation rules to the Polish generation structure and its obsolete grid.

Gas

The Polish gas market is not moving and the Ministry of Economics states openly that they want to postpone liberalisation until 2010. This is by no means allowed under the Directives. Their invalid argument is that they want to diversify before enhancing competition, but it is competition that will cause diversification and enhance security of supply.

PORTUGAL

Main issues

- **Market opening and competition:** from 4 September 2006, all electricity customers, including households, became eligible consumers with an option to revert to regulated (public utility) market. However in practice, due to the existence of favourable regulated tariffs only 11% of the national consumption is supplied in the competitive market. In addition long-term Power Purchase Agreements (CAE), tie up to 62% of consumption. MIBEL, a regional electricity market encompassing Spain and Portugal, started operation on 3 July 2006, but trade is still extremely limited.

As far as gas is concerned, liberalization is scheduled to begin in 2007, when the derogation Portugal enjoys as emerging market will expire.

- **Regulatory authorities:** the Regulator, ERSE, was established by "Decreto-Lei nº 97/2002" of 12 April 1997. It approves tariffs (ex-ante), fixes network access conditions, and issues considered opinions. As far as complaints and appeals are concerned ERSE cannot however take binding decisions, but has to refer the cases to an ordinary Court. ERSE appears to be effective and independent and, over years, gained good consideration by stakeholders, but it is possibly understaffed. Recently ERSE proposed a 15,7% increase of the electricity supply tariffs, but the government subsequently limited the increase to 6%. The regulator has limited competence for cross-border issues.

- **Unbundling:** Electricity TSO (REN) is ownership unbundled, DSOs are legally unbundled. The level of functional unbundling of the most important DSO, EDP Distribuição is questionable. Other DSOs are very small and have a negligible market share.

- **Transparency of the market:** in electricity market a regulated sector co-exists alongside a liberalised one. The arrangement is transparent, but the new legislation approved in 2006, makes it obsolete. Full implementation is still held back by the existence of long-term power supply agreements.

- **EU integration**: Portugal is interconnected with Spain. Interconnection capacity is currently 1200 MW (i.e. 15% of Portugal peak load of 8.528 MW) and new lines are being built to double it, which should help addressing the current problem of inadequate interconnection capacity.

- **Public service obligations:** Security, regularity and quality of service; universal service; consumer protection (also with regard to tariffs); energy efficiency, environmental protection; cooperation with Azores and Madeira regions (ultra-peripheral). To date no PSO has been notified.

Overview on regulatory framework

The process of liberalisation of the former monopolistic power sector held by the Portuguese state started in July 1995, when a whole package of legal instruments was enacted in order to comply with the provisions of the first Electricity Directive 96/92/EC.

Decree-Law nº 182 of 27 July 1995 – Established the framework of the so-called SEN - Sistema Eléctrico Nacional (National Electric System) fixing the basic rules for generation, transport and distribution of electricity

Decree-Law nº 184 of 27 July 1995 – Established the legal framework regulating distribution.

Decree-Law nº 185 of 27 July 1995 – set up the legal framework regulating transport, establishing the national TSO, Rede Eléctrica Nacional (REN), which owns and operates the high voltage transmission system under a long term concession agreement.

Decree-Law nº 186 of 27 July 1995 set up the legal framework regulating generation

Decree-Law nº 187 of 27 July 1995 established the independent regulator ERSE, Entidade Reguladora dos Seviços Energéticos (Regulatory Authority for Energy Services), which subsequently was also given the task of regulating the gas sector (Decree-Law nº 97, of 12 April 2002.

Decree-Law nº 188 of 27 July 1995 established (Electricidade de Portugal), as the public body responsible for the management of the national electricity system, giving it a holding structure. Generation was entrusted to the EDP's subsidiary CPPE (Companhia Portuguesa de Produção de Electricidade), which owns and operates most Portuguese plants. Distribution was entrusted to EDP's, subsidiary EDIS (EDP Distribução de Energia) under a 20 year concession agreements. EDP runs also a large supply activity

An important feature of the electricity system was the split between the public electricity system (SEP), and the independent system (SENV). In the public system, a group of power stations sells electricity to the single buyer, which is owned by REN, which sells the energy to the supply business of EDP, which then sells the electricity to customers under the regulated tariff system. In the independent system, customers are eligible to choose from whom they buy their electricity, and for these customers, only the costs of the network are regulated.

This legal structure is currently being reformed in order to comply with the new Electricity Directive 2003/54/EC and to prepare for the establishment of MIBEL, a regional energy market integrating Spain and Portugal. Decree-Law nº 29 of 15 February 2006 reformed in deep the electricity sector, replacing the existing dual system with an integrated one. It has been followed by Decree-Law nº 172 of 23 August 2006, which implements more in detail its provisions.

Finally the Decree-Law n° 30 of 15 February 2006 sets forth the general principles concerning the organization of the natural gas markets (reception, storage and re-gasification of natural gas; underground storage; transmission; distribution; supply). It is the first measure transposing Directive 2003/55/EC, since Portugal enjoys derogation until 2007 as emerging market.

Description of the market

Electricity

Portuguese electricity market is relatively small: national consumption was 48,5 TWh in 2005, but is growing at a steady pace. The main participants in the markets are as follows:

• The dominant EDP, with a market share of 49,6%, and a large market power.

• Other competitors are Tejo Energia[26] with 9,7% and Turbogás 13%[27]. Small special-regime generators (from renewables and waste, as well as CHP plants) represented 13,5%, imports 14,1%.

• REN is the transmission system operator (TSO), holder of a concession awarded by the Portuguese State: its shares are owned by the State (20%), EDP (30%), CGD - Caixa Geral de Depósitos (20%) and Parpública - Participações Públicas (30%)

• EDP Distribuição, a company owned (100%) by EDP group, holds the infrastructures of the electricity distribution grid in High, Medium and Low by means of a license[28]. In addition to this license, EDP Distribuição manages and operates most[29] of the Low Voltage (LV) distribution grid in continental Portugal (Azores and Madeira have different arrangements).

Gas

Being an emerging market, Portugal is entitled to derogation from most of the provisions[30] of the Directive 2003/55/EC until next year. The gas market has not been open and the incumbent, GALP ENERGIA, still enjoys monopolistic rights.

To prepare for the new requirements, the Portuguese authorities adopted Decree Law n° 30 of 15 February 2006, and the subsequent implementing Decree n° 140 of 26 July 2006, setting forth a new market organisation. Inter alia, the new legislation states that all electricity generators (which represent more than 50% of national consumption) will become eligible on 1 January 2007, all customers consuming more than 1 million m³/year on 1 January 2008, all customers consuming more than 10.000 m³/year on 1 January 2009, and finally all the others, including domestic ones, on 1 January 2010.

REN - Rede Eléctrica Nacional, will incorporate some gas companies and will therefore become also the national gas TSO, and will change its name into REN - Redes Energéticas Nacionais. It will be responsible for high-pressure natural gas transmission, underground storage of natural gas and LNG reception, storage and re-gasification.

Issues

Electricity

Functioning of the wholesale market

The two main issues are: the long-term power purchase agreements (LT-PPAs), and the existence of regulated tariffs for eligible customers.

Most Portuguese power plants (approximately 8.500 MW out of an installed capacity of 12.700 MW) sell their production to the national Single Buyer through "*Contratos de*

[26] International Power 50%, Endesa Generación 38,9%, EDP Group 11,1% - Operates a coal-fired power plant in Pego, 2 x 300 MW.

[27] EDP owns 40% of Turbogás.

[28] Once the concession expires, local authorities can repossess the wires, but in that case compensation will be due to EDP.

[29] There are other small low voltage distributors but their overall consumption is below 1% off total consumption.

[30] Articles 4, 7, 8(1), 8(2), 9, 11, 12(5), 13, 17, 18, 23(1), 24 of Directive. Notification received on 1st July 2004

Aquisição de Energia (CAE)". Such arrangements have been questioned by the Commission under EC Competition rules (case N161-04); after a negotiation the government adopted Decree-Law n° 240 of 27 December 2004, stating that these LT-PPAs had to be terminated and replaced by a system for compensation of stranded costs "*Custos com a manutenção do equilíbrio contratual (CMEC)*", a solution similar to that adopted in Spain.

Decree-Law n° 240-04 has never been enforced, and LT-PPAs are still operation, determining a lack of available electricity to be sold on the unregulated market. In fact the solution adopted in Spain has caused serious problems and the Government had second thoughts; in addition because of the delays in the starting of MIBEL, no reliable market price has been available to calculate the compensation for the generators; in fact DL-240 mentioned a market price of € 36 MWh, with is nowadays highly unrealistic. On the other hand the very existence of these LT-PPAs, as well as the current regime of regulated tariffs in Spain, represent a large obstacle to the development of a liquid market. Such problems could be eased when the planned (2400 MW) new CCGT power plants will come on stream, but this will happen in 2009 at the earliest.

Functioning of the retail market

The Portuguese electricity market is conventionally divided in segments according to the level of tension of supply; the level of tension correspond in practice to the level of consumption. All of them, including very large ones, are entitled to be supplied at regulated tariffs. Because of the good interconnection capacity and of the much larges size of the Spanish market, unregulated Portuguese prices are determined by those recorded in the Spanish exchange; as those rose sharply during the last twelve months, the Portuguese regulated prices become more interesting than market ones, namely for large and very large customers. As a consequence most of them switched back to the regulated market determining a very unusual situation. Only 3% of very high and high tension customers' consumption is purchased in the unregulated market, while these percentages rise to 62,6% and 28,9% respectively for medium and low tension customers. In other words, new entrants target mainly small and medium enterprises, and are eager to enter the households market, which has been opened on 4 September 2006, while are unable to compete with regulated prices for large customers. In addition, since the regulated system as a whole is not subsidised, in practice small and domestic customers subsidise large ones.

EDP Distribuição only sells electricity in the regulated market; its functional unbundling process is not yet achieved: separate buildings and separate databases have been planned, but not yet implemented. There are instead no plans for a separate brand or ownership unbundling. Operational management is separated, but the board will only be in 2007. A commercial relations code (issued by ERSE) imposes strict rules about confidentiality of information.

The DSO is obliged to purchase electricity from some small generators ("regime especial": wind, biomass, small hydro, CHP) at higher feed-in tariffs: the costs are spread on all customers.

Billing is monthly and EDP Distribuição supplies reading data to suppliers within five working days. All High and medium voltage customers are supplied with electronic meters which allow remote reading at up to 15 minutes intervals.

Recently ERSE proposed a 15,7% increase of the electricity supply tariffs, but the government subsequently limited the increase to 6%. Mr. Vasconcelos, president of ERSE, subsequently resigned.

EU integration and trans-border electricity trade

The Portuguese electricity market is claimed to be too small for an effective competition to develop, and has only one electric border, with Spain. The most effective option therefore is a tight integration between Spanish and Portuguese electricity markets. In November 2001 the two governments agreed the creation of a single Iberian electricity market, the MIBEL, which should have started operating in 2003. Several government changes in both countries repeatedly delayed the establishment of MIBEL which eventually started operating on 3 July 2006. The market is therefore still in its infancy and has been unable to make any substantial impact. For practical reasons the market is split in two parts: OMEL, a spot market based in Madrid, and OMIP, a future market based in Lisbon. To date, trading is very thin in OMIP, while price caps have been imposed on OMEL. The case of MIBEL is paradoxical: OMIP, the futures branch located in Portugal is working only for Spanish customers (there very little electricity available in Portugal) while OMEL the spot branch located in Spain is allegedly heavily manipulated by the Spanish government. A correct functioning of MIBEL is also important to solve the problem of PPAs.

No agent benefits from any reserved interconnection capacity. A system for joint capacity allocation has been agreed, based on a mix of explicit and implicit auctions and counter trading. The two TSOs will adopt coordinated redispatching to insure actual availability of capacity.

Generation capacities

Total installed generation capacity is 12.821 MW, well above the maximum demand of 8.528 MW, but the 4.915 MW of hydroelectric capacity are often unavailable in dry years as well as the 896 MW of wind generation.

New power plants have to be build to match the increasing demand and to reduce the dependence from imports; indirectly they will increase competition on the generation side.

In 2005 one CCGT group (392 MW) entered in production as well as two hydropower plants rated 196 MW and 421 MW wind.

For the next few years four CCGT of 400 MW are planned as well as two 250 MW peak power plants, while almost 1000 MW of obsolete power plants will be decommissioned.

Building of infrastructure

Interconnection with Spain is currently 1200 MW (i.e. 15% of Portugal peak load of 8.528 MW) and new lines are being built to double it. Currently both the Portuguese and Spanish TSOs system operators are considering joint projects of network expansion, in the framework of the implementation of the MIBEL, namely upgrading the Douro Internacional interconnection with a new line at 400 kV. A joint working group considers a 2400 MW capacity as the optimum from economic and technical point of view. The TSO prepares, every other year, the network investment plan for the next six years, which describes the key requirements of the transmission system, including the interconnections. It decides

investments to be made in the system, taking in account technical and economic criteria, such as costs (investment, operation and maintenance) and benefits (reduction of load losses and not supplied energy). The plan is then submitted to the Regulator for advice.

ERSE regulates all investments in the transmission system, including interconnections.

CONCLUSION

Despite the efforts of the regulator the Portuguese electricity market still has a long way to go towards a fully competitive status. Its size is too small to allow full competition development and integration with the Spanish market (MIBEL: the only possible, considering geographical limits) is not proceeding at a satisfactory pace. Late transposition of the Directives together with regulated tariffs for supply to eligible customers and overall the existence of long term power purchase agreements binding most of generation capacity have been to date prevented the massive entrance of new suppliers.

The gas market is still organised as a monopoly: being an emerging market the country enjoys a derogation until 2007.

Slovenia

Main Issues

Slovenia's high dependence on its neighbours for all aspects of system security argues in favour of **intensified transmission system and regulatory co-operation**.

The regulator is weak and the position will be assisted by a clear 'charter' of regulatory powers that the regulator should dispose of. This could be done at EU level.

The need to have **cross border additions to the regulated asset base** could ameliorate some of the infrastructure issues imposed by neighbours.

The **unbundling** of distribution companies is not relevant in a country where no distributor is above the threshold mandating unbundling.

No issue relating to public service obligations was raised.

Overview of Regulatory Framework

Transposition

The Slovenian position on transposition is satisfactory, barring those issues which are currently *sub judice.*

Necessary Regulatory Powers

The Slovenian regulator is widely regarded as being chronically weak. His powers should be augmented, new resources given, and the process for enforcement clarified.

Licensing

The Slovenian national legal regime does not allow authorisation licensing, only prescriptive licensing. This means that the licensing authority must establish all aspects (including operational aspects) of a company's activities – unlike other countries which say simply "Company X is authorised to do Y". The result is that licensing as an approach is being abandoned. For example, rather that reform the wholesale trader's license, the Ministry simply abolished the requirement. Abolition of all licenses is now being considered. However, the regulator fears that abolition will lead to the use of Slovenia as a haven for unlicensed traders etc.. The regulator would like licensing powers transferred to the regulator and made more monitoring-based rather than prescriptive. The regulator noted that the present licensing system – which requires all issues to be agreed up front – stops any innovative company entering the market.

It would be good if licensing was brought into line with common EU practice.

Market monitoring

The Slovenian regulator has no role in market monitoring. This is a particular weakness given that market monitoring as a key core competence of regulators. It is not clear that this competence is given to any other entity as there is no evidence that anyone is performing this role.

Example

No new generation facilities had been built or planned since 2005 and the regulator has no authority to encourage new entrants. Eventually this would lead to a generation crisis.

Positive Comity (Cross-Border regulatory co-operation)

The regulator in Slovenia is unable to effectively co-operate with regulators in regard to any decisions made in neighbouring states. On net transfers and on other issues, the Slovene market is the subject of free riding in other states that can take decisions that adversely affect Slovenia. The principal source of Slovene market disruption is the decisions made in Italy, Austria and Croatia.

In such cases it seems necessary to establish a right to request cooperation and action of the competent authority of the Member State where the alleged behaviour exists (a positive comity power).

Market Issues

Electricity

Market and transmission system operator integration

There are converging views that Slovenia is acutely suffering from transit flows for which it is not compensated. In Slovenia's case, up to 15%[31] (20% of all electricity flows are covered by ITC mechanism) of income for the TSO comes from CBT transfers which are priced at cost. This means that infrastructure specifically built for transfer is priced below market remuneration and that this is a drag on the TSO's revenues.

The regulated asset base of 3rd country companies that benefit form this system should be enlarged to include some of the costs of this system. (It would also remove the assets form the Slovenian TSO system.) Such a move would force a correction of prices between transit flows and generation costs. The Slovenian regulator should be allowed to determine this, though enhanced co-operative powers amongst regulators would be needed.

There also are concerns due to the fact that the market is too small to provide independent price indicators. The manipulation and control of the NTC values by the Ministry of Economy is having a bad effect on the development of the market. Borzen is trading below 3% of the wholesale market and the effect is to have extreme and unrepresentative volatility in the market based solely on the actions of one or two participants in a very small market.

It seems that a co-ordinated auction office for the region take responsibility for the NTC values. This would mean that NTC values be determined by a non-governmental authority. The regulator and the Ministry were also willing to see an early end to the restriction and the derogation (from Reg. 1228/2003) on the NE border which is disrupting price formation.

Distribution system independence and imbalance charges

The DSOs combine to keep competitors out of their markets.

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[31] A speculative figure provided by the regulator; not confirmed.

Example:

All companies active on the market must provide load forecasts[32] to ELES (the TSO). The distribution companies (discos) provide this data (at cost) to ELES, but independently competitors to the incumbent distribution companies must do this too. The discos sell this data to their competitors at fixed, higher prices, organised through their trade association. The distribution companies acknowledge that this was part of their competitive strategy to keep competitors out of the market.

Not only that, the data is provided prospectively (6 weeks ahead) to ELES by the discos, but one month behind to competitors, so imbalances mount up. Imbalance charges are punitive once a 25% threshold is passed: either the company in imbalance must pay two times market price + administrative charges (at time of imbalance) or it receives nothing if it is in surplus.

A solution to such anti-competitive behaviours could be complete ownership DSO unbundling, but realistically there should be disco consolidation first.

Distribution System operators

There are many small DSOs in Slovenia. Without government action, customers covered by these DSOs will be unable to benefit form the benefits of competition.

Public service obligations

The system of supplier of last resort and regulated tariffs is discouraging investments and also new entrants. Slovenian authorities may wish to think about reform as this system means that new entrants will always face a legacy supplier with strong customer loyalty.

Transmission system operators

Problems lie outside the borders of Slovenia. Firstly, Polish and Czech long term contracts into Italy cause major problems. Secondly, wind production in Germany and customers for this in France increase East-West flows. Thirdly, low-cost hydro in the East and South is exported to Western Europe. Collectively, UCTE N-1 recommended security rules are chronically endangered and the sole unilateral means to solve this is to cause a blackout in the South (extending into Croatia) and/or separation of UCTE zones. The multilateral solution would be a pentilateral NTC agreement covering the North Adriatic area.

At the management level, ELES manipulates the NTC on all borders to (1) ensure system stability and (2) price stability[33]. At the time of investigation in 2006, there have been 15 NTC changes to the calculation and/or allocation methods. On three occasions, the changes meant physical disconnection from the Italian grid. Greater stability would come form Slovene companies being able to operate both sides of the Italian Slovene border (at present non-technical barriers prevent this, particularly licensing).

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32 "napoved voznega reda'

33 The reason for this is that the Ministry of Finance is trying to manage pricing in an effort to keep inflation low (in order to join the Euro). At present Slovene retail electricity prices are lower than Italy and Croatia has even lower prices. So the Ministry of Finance intervenes to manipulate NTC on northern and western borders to keep price stability; Croatia colludes in this by varying NTC on the southern border and keeping profits in Croatia. So a pricing system that looks good for traders is in fact maintained by the authorities for reasons unconnected with the electricity market.

If the situation does not improve, ELES will install a face-shifter transformer (expensive) and simply cut the connection.

This would be ironic as the integration of physical markets would have lead to the perverse outcome of breaking of physical connection. This argues in favour of greater TSO co-operation.

Gas

It would appear that the gas market is too small to merit either attention or competition. Geoplin, the incumbent company, has 24 staff. There are 180 wholesale customers in Slovenia with a consumption of about 1-1.2 bcma, and of these 30-40 are urban distribution systems. Import capacity is fully booked with no plans for immediate expansion[34]. There is no storage in Slovenia only limited linepack.

Plans for diversification bypass Slovenia (Crk – Nabucco pipelines). The Rovigo terminal may have an important impact (if it is built).

Conclusions

The regulator's powers should be enhanced and possibly attributed some of the Ministry's competences. A better balance of powers is needed.

The regulator should have some way of obliging neighbouring regulators to take into concern the issues within Slovenia.

Distribution unbundling in Slovenia does not seem to be of any value in Slovenia, given the size of these companies: a reassessment of the policy is needed in order to bring competition to this segment of the market.

[34] A doubling of capacity after 2009 is being discussed.

Slovakia

Main issues

- **Market opening and competition:** In the electricity market, the largest generation company owns roughly 80% of capacity. Three large distribution companies are active in Slovakia and compete for business customers. The incumbent operator supplies all gas in the Slovak republic and owns the transmission and distribution networks. Although access is available for other potential suppliers, there have been no new entrants for gas.

- **Regulatory authorities:** The Regulatory Office for Network Industries (RONI) is considered to be independent from both the industry and government in terms of its duties to regulate the networks. However, draft legislation is under preparation, which may severely restrict the independence of the regulator. The regulator has no competence for cross-border issues.

- **Unbundling**: transmission and distribution networks have been or are in the process of being legally unbundled. The transmission system operator for electricity is separate in ownership terms from the main generators and suppliers, it owns transmission assets.

- **EU integration**: the Slovak market would gain from further EU integration, as it is currently dominated by incumbent operators for both electricity and gas. Different conditions persist for gas transit and transportation.

- **Transparency:** generally there is scope for improvement on transparency, particularly with respect to cross-border transportation services.

- **Public service obligations:** until now, regulated prices were limited to residential customers. New legislation under consideration may expand the scope of regulated prices and have an impact on already fragile competition.

Overview on regulatory framework

Market opening in Slovakia is a relative recent process which was started in 2001 in anticipation of accession to the European Union.

The law on the Regulation of Network Industries (276/2001) established the energy regulator (RONI) and some other basic measures. The Energy Law 656/2004 of 2005 implemented the measures required by the gas and electricity internal market Directives as follows:

Full market opening is required under Section 18(11) and Section 20(6) of the Energy Law 656/2004. Market opening for non-households was implemented from 1 January 2005 and households will be free to choose supplier on 1 July 2007.

Legal unbundling of gas and electricity transmission system operators is required by Sections 23 and 42 of the Energy Law. In practice, other than the participation of the Slovak government, the transmission system operator for electricity is separate in ownership terms from the main generators and suppliers. The gas transmission system operator was legally separated in June 2006.

Electricity and gas distribution systems must be legally separate from generation or supply by July 2007 according to Sections 25(1) and 44(1) of the Energy Law, which enter into force on 1 July 2007. However legal unbundling has already been implemented for gas in June 2006 and for electricity this will occur in January 2007.

The regulatory agency: the Regulatory Office for Network Industries was created in the 2001 Law. It is independent from both the industry and government in terms of its duties to regulate the networks. However, the Ministry has powers over some licensing decisions (e.g. on generation facilities). It also is responsible for setting out market trading rules (for example Ministerial Decree 124/2005).

Description of the market

As in many Member States, the electricity and gas systems were initially characterised by a high level of centralised control and monopoly, or near monopoly, provision. This remains the case for gas, where the position of the incumbent shipper/supplier (SPP) has not yet been put under any competitive pressure.

In the electricity market, the largest generation company (SE) owns roughly 80% of capacity. In addition, there are three large distribution\supply companies which cover the entire territory of Slovakia. These companies, however, have very little generation capacity of their own and are largely reliant on SE for their suppliers.

Electricity market

For electricity, the main participants in the markets are now as follows:

Slovenska Elektrane (SE)[35] is the main generation company which also has begun to supply customers directly.

The three traditional supply/distribution companies are: ZSE[36], VSE[37] and SSE[38]. Each have a regional distribution area. However there is now competition between the three companies for business clients. The three suppliers do not have their own generation capacity and are dependent on annual negotiations with SE to serve their needs.

Supply licences have been awarded to 13 national companies and 5 foreign companies. Several companies from the Czech Republic have entered the market as traders\suppliers including CEZ. There is little congestion between the two Member States and suppliers can also source electricity from the Czech power exchange. However, apart from a few very large users, there has been little meaningful customer switching yet, according to the regulatory office.

New entry into the generation market appears to be constrained by uncertainty about the future plans of SE in terms of investment in new nuclear capacity. The most likely outcome appears to be that close units at Bohuvice are replaced by new investments at Mohovce. In the

[35] 66% owned by Enel, 34% by the Slovak government
[36] 49% owned by EON, 51% by the Slovak government
[37] 49% owned by RWE, 51% by the Slovak government
[38] 49% owned by EDF, 51% by the Slovak government

meantime there is likely to be a deficit between supply and demand that is expected to be filled with imports. This may well provide a route for new suppliers to enter the market.

There is currently a lack of a functioning and liquid wholesale market in Slovakia since the main supply companies contract for most of their capacity with SE on an annual basis. As already noted, the Czech, Austrian and German power exchange is used by traders and the main generation companies.

The market for balancing and ancillary services is rather tightly controlled by the RONI which sets a maximum price for the cost of these. There is currently a lack of independent providers of such services either from the generation or the demand side and SE has almost total dominance in this respect. Some relaxation of such controls might provoke a higher level of entry into the market.

Gas market

The gas market in Slovakia is characterised by a high level of dependence on a single external supplier. It must also be noted that Slovakia is very important transit route for gas supplies into the remainder of the European Union.

The company Slovensky Plynarensky Priemysel (SPP) currently is responsible for supply of all gas in the Slovak republic. It is also the owner of the transmission and distribution networks. Natural gas for the domestic market is imported by SPP[39] on the basis of existing contracts with Gazprom.

Following the unbundling of the transmission and distribution networks, access is available for other potential suppliers but as yet there has been no penetration by other new entrants. However, it is expected that there is potential for competition in due course from two main sources. Firstly, companies with access to gas at, for example, Baumgarten should be able to sell into the Slovak market. Other companies which are already using the Slovak system for transit to Baumgarten and points west may also use such gas to supply customers in Slovakia. Alternatively companies with access to sources from the Mediterranean may also be able to use this gas in the Slovak market via Baumgarten. Secondly there is the possibility of external suppliers directly selling to final customers. Approximately two-thirds of the gas used in Slovakia is by large industrial users. It is expected that this market will develop more rapidly than, for example, the household market.

Evaluation of future prospects

Competition in the electricity and gas markets has not developed strongly to date. This position is not, largely, a result of failure to implement the existing Directives and most of the basic requirements of the 2003 legislation is either already in place, or will be shortly.

Instead, the main obstacle to competition is the dominance of incumbent companies in the market, in particular SE and SPP. The fact that the market is still organised and regulated on a national basis contributes heavily to the effects of such dominance. The current situation has provoked regulators, not only to control network access, but also to intervene in parts of the sector where competition is expected to develop, in particular the balancing and ancillary

[39] SPP is owned 51% by the Slovak government.

services market, where the mechanism is controlled by the RONI. It is to be expected that such controls will create problems with security of supply.

To date Slovakia has resisted placing restrictions on retail price levels (other than for households where the market is not yet open). This will be advantageous for the development of security of supply and for investment in the medium term. The government and regulator should ensure that any future measures to protect vulnerable customers are well targeted and do not damage the prospects for competition – for example by setting ad-hoc price controls.

Prospects for competition in the electricity and gas market would be considerably improved if there was additional integration with neighbouring jurisdictions in terms of market design and network operation. The Regional Initiatives should therefore work towards this as a priority. Without market integration it is difficult to see how competition will develop in a really meaningful way, especially given the inherited generation mix for electricity and the fact that gas imported from Russia is really the only source in physical terms.

The impact of the future legislation, in particular on the independence of the regulator and on prices, will have to be assessed and its compatibility with EU legislation checked.

Conclusion

Unbundling provisions have been implemented satisfactorily for electricity and gas transmission system operators. However, a higher degree of integration with neighbouring jurisdictions is essential for competition to function, whereas at present the regulator has no cross-border competences.

Some regulatory issues remain on the electricity side with respect to the design of the balancing and ancillary service market. A higher level of wholesale market development is needed to give the right signals for investors. Again, this needs to be achieved in co-ordination with other Member States

Unbundling of distribution system operators needs to be completed on the electricity side. Regulation of household tariffs needs to be made consistent with the introduction of competition and focused on vulnerable customers.

FINLAND

Main issues

- **Market opening and competition:** The Finnish electricity wholesale market works relatively well, as part of the Nordic market. However, on the generation market, dominant positions remain a serious problem. The supply market still seems to lack real competition.

- **Regulatory authorities:** There are issues regarding the Nordic market arrangements which have not been solved by the regulators. This calls for more regional/European regulatory powers.

- **Unbundling:** The TSO owns transmission assets. DSOs remain mostly vertically integrated. It remains to be seen whether the resulting level of unbundling is sufficient.

- **Transparency of the market:** Market transparency is at a high level, even if there is still room for improvement.

- **EU integration**: The co-operation between the Nordic TSOs is good and can be considered as best practice in many areas, such as in transmission planning. Cooperation between the Nordic regulators is also good. However, unsolved problems call for further integration of TSOs and problem-solving mechanisms for regulatory authorities.

Overview of the regulatory framework

Finland completed its implementation of the second electricity and gas directives by late 2004, a little later than the deadline. However, it has to be noted that Finland, together with the other Nordic countries, had already implemented the first electricity directive with a legislation that goes in many respects far beyond the minimum requirements of the second directive. For example, the market was fully opened up through implementation of the first electricity directive.

The Finnish regulator, Energy Market Authority (EMA), is an independent agency under the Ministry of Trade and Industry. The Finnish regulatory model initially followed an ex-post approach, but with the second directive an ex-ante regulatory system has been created. The regulatory period for networks is four years.

Regarding unbundling, Finland has waived small electricity distribution companies from legal and functional unbundling. The thresholds are, however, lower than allowed by the electricity directive. There are 90 electricity distribution companies in Finland.

The gas market in Finland is relatively small. Finland has opted for a derogation based on an isolated system, which means that no real gas market exists. All gas comes from Russia from exported by Gazprom to a single importer, Gasum Oy.

There is a close co-operation between the Nordic Governments on energy market issues. The Ministers set targets for market development and actively monitors the market. This is the basis for close co-operation between regulators and between TSOs.

Description of the market

Electricity

The generation market is dominated by two big players, namely Fortum (majority state-owned) and PVO (mainly manufacturing and electricity industry-owned). There are several smaller producers on the market, including municipal companies. The generation market is considered by most to be a Nordic market, whereby companies sell wholesale electricity through Nord Pool. The supply market remains largely national, although the Nordic Ministers have set a target of creating a Nordic retail market.

Customer switching is reasonably common in Finland. Among small and medium sized industrial and business customers, it is estimated that 82% of the volume and 50% of the number of customers of electricity bought by customers is based on contracts that the customers have either renegotiated with their local supplier or made with a new supplier. Very small business and household customers have been much more passive, the corresponding figure being only 30% of the volume.

Gas

There is only one wholesale gas company, Gasum, on the market. The number of retail gas companies is around 30; they supply gas to small distribution areas. Wholesale gas is supplied at a regulated price. No gas market exists, except a small secondary market.

Issues

Electricity

Functioning of the wholesale market

There is criticism in Finland of the functioning of the Nordic market. This criticism has increased due to the recent high prices on the market. Nord Pool is said to be designed for the Norwegian hydro power system, and is less adapted to fossil-based power plants with longer lead times for start-up. However, no unanimity exists regarding how the system should be changed.

When there are no transmission constraints preventing cross-border trade, the whole Nordic market has the same price within Nord Pool. However, when bottlenecks limit trade, Finland becomes its own price area. In 2001- 2005 Finland was a separate price area from Sweden between 1% and 29% of the time on average each year, depending mainly on hydrological conditions. When this separation takes place, the Finnish price is often set by generators owned by the biggest player on the market.

Many consider that generators have a bigger say in Nord Pool than electricity buyers. There seems now to be rising awareness among big electricity users that they have to be more active in Nord Pool either directly or through brokers. There is also a feeling among small end-customers that they have no influence on pricing at all.

The Nordic market is created through co-operation at all levels under a political umbrella of the Governments. However, lately there seems to be less progress being made in Nordic cooperation. Resolving problems such as handling transmission constraints and harmonisation

of approaches such as reserve capacity have not been easy. The idea of a common Nordic TSO has already been discussed for some time, but no decision to create one has been taken.

Nordic Governments have started to look at the market more from a national perspective. Examples of this are the special arrangements studied in order to provide cheaper electricity to big electricity users in Norway and Sweden. These arrangements might put the functioning of the whole Nordic market in danger.

Windfall profits

The emissions trading scheme has generated windfall profits due to the increase in market prices for both generators receiving allowances and to non-CO2-emitting producers. This is a fact that even the companies benefiting from these profits admit. There are, however, opposite views about what measures, if any, should be taken. The Government has studied how it could introduce a windfall profit tax for nuclear and hydro production.

New entrance and new investments

The national energy policy has favoured a versatile generation mix: all the main fuel options have been allowed, including nuclear. The legislation puts no constraints on new entrants or on foreign investors. However, generally speaking it is rather difficult to enter the Finnish market as a newcomer without buying existing companies, both in generation and on the retail market. The entrance of Vattenfall and Eon took place through acquisitions. In practice new entrance is difficult given the nature of the most economically viable investments: nuclear and large-scale combined heat and power generation (CHP). Investment in renewables and in small-scale generation is, however, more accessible, including for new players**.** The Government has recently worked on better conditions for small-scale power production.

Transparency

The wholesale market is considered relatively transparent, mainly due to Nord Pool. Extensive information on prices, on electricity exchanges between price areas, on availability of generation units and on water reservoir levels is published on the Nord Pool website. However, there are opinions that some key information regarding the monitoring of competitive behaviour of dominant players is not published or not available even to the authorities.

Handling of transmission bottlenecks

Maybe the most controversial issue in the Nordic electricity market is the handling of transmission constraints, especially those inside Sweden. The discussion is about the definition of structural bottlenecks, whether Sweden should have more than one price area, and of the congestion management method used. Currently Sweden remains a single price area, which is made possible by reducing cross-border flows when internal congestion is anticipated. Attempts have been made to find a solution but without success so far.

Functioning of the retail market

Generally speaking there is some competition for final customers, which is also confirmed by the switching rates. However, there are serious doubts raised as to how wholeheartedly retail companies compete at the moment. There is evidence that hardly any companies try to win new customers, and that customers are relatively passive. A strong indication of this is the

existence of high price differences on the market. Most suppliers seem to rely on customer passivity, which allows them to keep a comfortable price level. If the customer intends to switch supplier, a sufficiently lower offer can be made to keep the customer. In addition, 'obligation to supply' tariffs are considered to make it easy for small customers to do nothing. In Finland there is an obligation to supply for the company which has the biggest market share in an area. Some companies keep this 'obligation to supply' tariff low enough that there is insufficient motivation for smaller customers to shop around.

About half of the retail companies do not make offers outside their distribution area, thus closing de facto the retail market with low cost-based pricing. As the market share of these companies is relatively small, about 15% of the number of customers, it is not considered to be major problem.

Prices are rather transparent. For example, EMA has a price comparison service on its website (www.sahkonhinta.fi).

Independent suppliers, which probably have the highest motivation to gain new customers, are dependent on the wholesale market and cannot hedge their risks through own generation assets. Independent suppliers are afraid that vertically integrated companies might use the increased profits they gain from generation on the supply market to sell with low or even negative margins where and when necessary.

Big companies advocate further harmonisation of the Nordic retail market, including requirements for automatic meter reading. Smaller companies are hesitant as they might incur costs and potentially increased competition imposed on them without being able to draw benefits from the investments.

Unbundling

The Transmission System Operator Fingrid is owned by Fortum, PVO, the Finnish state and a number of institutional investors. In general, Fingrid is considered to have acted in an impartial manner, with a clear target to keep the transmission grid in good shape, to make the necessary investments but to keep tariffs low. However, in the recent discussion on a cable from Russia, claims have been made, particularly by the applicant for the licence, that the owner's interests are visible in Fingrid's positions.

As regards distribution companies, it is quite evident that functional unbundling practices are not yet fully developed. In fact, the Finnish law only requires functional unbundling from the beginning of 2007, which is later than allowed by the directive. However, some of the unbundling requirements have already been in force since 2004 and serious work has been done to implement the functional unbundling measures in practise. It remains to be seen Europe-wide whether a sufficiently non-discriminating behaviour on the part of network companies can be achieved through the measures required by the electricity directive (2003/54/EC).

Distribution network tariffs

The introduction of ex-ante regulation has progressed steadily. As the distribution companies have not been happy with the accepted yield level, which they feel hampers investment, a number of court cases have been brought. It will take still several years before the system has

finally stabilised. It is too early to conclude whether the tariff level is sufficient to keep the networks in good shape and to allow investments to develop the networks.

Powers of regulator

The Regulatory authority EMA was established in its present form in 1995, originally covering electricity network supervision and from 2000 also the gas market. Additionally, since 2004 EMA has been responsible for regulatory activities relating to emissions trading. EMA's resources are relatively small but generally considered sufficient. Some stakeholders consider that EMA needs more educational resources to activate the supply market**.** No major complaints on the work of EMA have been raised except the level of the network tariff, which remains controversial.

The Finnish Competition authority is responsible for monitoring the functioning of the wholesale market. EMA and the Competition authority have agreed to cooperate in an effort to optimise the use of the limited resources for market monitoring.

Reserve capacity

Reserve capacity is another issue which has been on the agenda of the Nordic Governments and TSOs for some time. Some years ago the Nordic ministers agreed on the principle that the Governments should provide an appropriate framework to allow the market to provide the necessary investments without extra support mechanisms. With reducing capacity margins, low levels of rainfall and extreme peak loads due to cold weather, the Governments have become nervous and are thinking about additional measures to guarantee capacity adequacy. In Finland the Government is preparing a temporary arrangement where some power plants which would otherwise be decommissioned will receive compensation to allow the owners to keep them available for peak load generation. There is a risk that it might be difficult to get rid of the arrangement even if it is meant to be temporary. There is no centralised Nordic arrangement in sight but Nordel works on common criteria and principles which eventual national mechanisms should fulfil.

Building of infrastructure

The Nordic TSOs have agreed on a Nordic Master Plan which includes five priority projects to be constructed at the first stage. There is a large consensus on the importance of these projects. It remains to be seen whether all projects can be finished within a reasonable timeframe, especially the overhead lines designed to relieve the bottlenecks in Southern Sweden. The project with direct Finnish involvement, the Fennoskan II cable between Finland and Sweden, seems to be progressing as planned.

Gas

Long-term contracts

There are complaints on the treatment of new customers compared to old customers with long-term contracts dating from the 1980s. The Competition authority is currently studying the case.

Conclusion

Most market participants take the view that the Finnish electricity market works relatively well, as part of the Nordic market. However, dominant positions remain a serious problem on the generation market. In addition, the supply market still seems to lack real competition. The most positive regarding the electricity market are the big generation companies, the most negative are industrial customers without their own generation assets. Small companies are somewhat afraid of the dominance of the big companies.

There is no gas market, but there are no major complaints as regards the present status. Only new alternatives for gas imports can bring competition to gas supply.

New impetus should be given to Nordic co-operation in order to continue the development of the Nordic electricity market and to avoid return to national interests.

Longer-term visibility on the new Government energy policy initiatives concerning the electricity market should been reached in order to secure investments.

The relevant authorities should be provided with better resources and monitoring tools to detect possible abuse of dominant position on the electricity market, and the transparency of Nord Pool should be increased.

Competition in the retail market should be bolstered so that improvements in generation and wholesale can be passed on more efficiently to consumers. Possible measures include rules on offer prices versus regular prices, customer education and further easing of the customer switching process.

Further unbundling of distribution and retail business should be considered.

A Nordic solution for the reserve capacity and capacity support mechanisms should be found, as this is crucial to investment for electricity generation.

SWEDEN

Main issues

- **Market opening and competition:** The Swedish wholesale market works relatively well, as a part of the Nordic market. However, dominant positions remain a serious problem on the generation market.

- **Regulatory authorities:** There are issues regarding the Nordic market arrangements and the connection to the Central European market, which have not been solved by the regulators. The most acute problem is the capacity allocation between Sweden and Eastern Denmark, as well as between Sweden and Germany and between Sweden and Poland. This calls for more regional/European regulatory powers.

- **Unbundling:** DSOs remain mostly vertically integrated. It remains to be seen whether the resulting level of unbundling is sufficient. The electricity and gas TSO, which is ownership unbundled, owns transmission assets.

- **Transparency of the market:** Market transparency is at a high level, even if there is still room for improvement.

- **EU integration**: Cooperation between the Nordic TSOs is good and can be considered as best practice in many areas, such in transmission planning. The co-operation between the Nordic regulators is also good. However, unsolved problems like capacity allocation between Eastern Denmark and Sweden call for further integration of TSOs and problem-solving mechanisms for regulatory authorities.

Overview of the regulatory framework

Sweden implemented the second electricity and gas directives by summer 2005, about one year later than the original deadline. However, it has to be noted that Sweden, together with the other Nordic countries, had already implemented the first electricity directive with legislation that goes in many respects far beyond the minimum requirements of the second directive. For example, the market had been fully opened with implementation of the first electricity directive.

The Swedish regulator, Energy Markets Inspectorate (EMI), is part of the Swedish Energy Agency. The Swedish regulatory model adopts an ex-post approach, as per the regulatory tradition in Sweden. This means that the companies apply a tariff and the regulatory authority checks the level of tariffs afterwards to see whether it is reasonable.

As regards unbundling, Sweden has chosen a full legal unbundling model for network companies. TSO is part of the state and can be considered ownership unbundled. Network companies are required to unbundle in legal and functional terms. However, network companies with fewer than 100 000 customers are exempted from the requirement of functional unbundling under Directive 2003/54/EC. There are 170 distribution companies in Sweden.

The gas market in Sweden is relatively small. However, the directive has been implemented in all its features, including LNG and gas storage, which do not yet exist in Sweden.

There is close co-operation between the Nordic Governments on energy market issues. The Nordic Council of Ministers set targets for market development and monitor the market actively. This is the basis for close co-operation between regulators and between TSOs.

Description of the market

Electricity

The production of electricity in Sweden is dominated by a few companies. In 2005, Vattenfall, Fortum and Eon Sweden accounted for 88 per cent of the country's electricity production. However, the wholesale power market is considered by many to be a Nordic market. The market share of the three largest Nordic electricity producers was 41 per cent.

The retail market remains, however, largely national. The Nordic Ministers have set a target of creating a Nordic end customer market. In March 2006, the Nordic Energy Regulators (NordREG) published a report discussing the preconditions for a common retail market. Harmonisation of data exchange and metering systems are identified as two of the most important preconditions in the regulator's report.

Supply companies and big end customers are able to buy electricity from the wholesale market. Buying from Nord Pool, however, includes a risk of zonal price differences. There is a product in Nord Pool to hedge against these differences, but it causes extra costs and is not very liquid.

Customer switching is very common in the Swedish retail electricity market. In total 54 per cent of electricity customers have either renegotiated their contracts or switched supplier since the market reform in 1996. Generally speaking competition on final customers is considered to work.

The balancing market is also a combination of the Nordic market (generation bids from all Nordic countries are pooled) and the national market (balancing price and settlement). Balancing and its corresponding pricing is also highly influenced by cross-border congestion. Only free capacity which remains from the day-ahead market can be used for the exchange of balancing power.

Renewable energy is a high priority in Government policy. The target is to become independent of fossil energy in the longer term. Renewable electricity is supported through a certificate system, which being market–based, ties in well with internal market principles.

Gas

The Swedish gas market is relatively small. There are several suppliers on the market even if the major part of supply is dominated by two companies. In Sweden it is more a question of gas competing against other fuels than competition between gas companies. Gas is considered by some stakeholders to be a threat to renewable energy development, which might have curbed the growth of the gas market. According to Government policy, investment in or the purchase of gas should be solely for commercial reasons.

Issues

Electricity

Functioning of the wholesale market

Most market participants take the view that the Swedish wholesale market works relatively well, as part of the Nordic market. However, dominant positions remain a serious issue, particularly on the generation market. The most positive as regards the functioning of the market are the big generation companies, the most negative are energy-intensive industries. Small companies are critical, since they are afraid of the dominance of big companies. Many consider that increasing the concentration level on the market should not be permitted.

Big energy users want to have a special market to cover their long-term electricity purchases. The current products on the Nordic wholesale market are too short-term in their view. The Government has announced that it will investigate this question.

Big energy users claim that the big players in the Nordic market do not have sufficient incentive to invest in generation or import capacity. An organisation of energy users named Basel has been set up to investigate ownership in new production capacity and import possibilities. A contract to import from Russia to Finland has been signed.

There are claims that the balancing market costs and associated risks create an obstacle for market participants to enter the wholesale market. There is a study initiated to investigate this issue.

Windfall profits

Windfall profits to non-CO2-emitting producers due to the increase in market prices is a fact that even the companies benefiting from these profits admit. There are, however, conflicting views as to what measures should be taken. In 2006, the Government increased taxes for nuclear and hydro production.

New entrance and new investments

Generally speaking, it is rather difficult to enter the Swedish market as a newcomer without buying existing companies. The entrance of Eon and Fortum took place through acquisitions. The generation mix has been subject to strong government policy: ban on new investment in nuclear power production and limits to expanding hydro power. According to the energy policy guidelines laid down by Parliament, investments to extend the Swedish natural gas system should be based on purely commercial grounds. The latest new investments have been made in wind and in Combined Heat and Power generation, which is a semi-closed market. Statkraft, the biggest Norwegian company, has shown increased interest presenting being more active in Sweden. There are also capacity increase projects in existing nuclear plants. In fact, Sweden now produces more electricity from nuclear plants than ever, even if the Barsebäck power station has been closed.

Strong positive incentives exist for the development of renewable energies, where also the national targets are set at high levels. Entrance to renewable generation is also easier for smaller players. Vattenfall has announced a big investment programme for wind energy, which has raised some concern among competitors criticising Government interference through the company it owns.

Many stakeholders advocate a more predictable framework for investments, preferably in the Nordic context.

Transparency

The market is considered transparent, mainly due to Nord Pool. Extensive information on prices, on electricity exchanges between price areas, on availability of generation units and water reservoir levels is published on the Nord Pool website.

Nordic market and price areas

The wholesale market is considered by most to be Nordic, whereas the supply market is national.

Big supply companies advocate full harmonization of the Nordic market. This would make for a common retail market, rational generation investment decisions, and use of common IT and metering systems throughout the region. Small supply companies are not so keen on harmonisation, as they are afraid of having new costly requirements imposed on them without any benefits.

Maybe the most controversial issue at the moment in the Nordic electricity market is the handling of transmission constraints in Sweden. The discussion is mainly about whether Sweden should have more than one price area, and about the congestion management methods used. Currently Sweden remains a single price area, which is made possible firstly by reducing cross-border flows and secondly, if necessary, by counter-trading, when internal congestion is anticipated. Several studies have been made on this issue but no short-term solution has been found yet. Further studies are under way, initiated by the Nordic Council of Ministers and by EMI and Svenska Kraftnät, the Swedish TSO. In the longer term new transmission lines in Southern Sweden should reduce transmission constraints in that area considerably.

Another issue related to cross-border links is third party access of the merchant lines to Germany and Poland. The regulation on cross-border electricity requires open access to these interconnectors, which is not currently the case. Open access would improve the integration of the Nordic market with the North-Western and North-Eastern European markets.

There is a long tradition of Nordic co-operation at ministerial and TSO level, and the regulators co-operate under NORDREG. However, resolving problems such as handling transmission constraints and harmonisation of approaches such as reserve capacity have not been easy. The idea of a common Nordic TSO has already been discussed for some time, but no decision to create one has been taken.

Functioning of the retail market

The retail market has been open to competition since 1996, and the customer switching rates are high. However, the question still remains as to what is the best way to promote competition. The monthly meter reading imposed by law is expected to increase clarity for the customer on electricity prices and to shorten lead times in customer switching procedures.

Independent suppliers are afraid that vertically integrated companies might use the increased profits they gain from generation to sell with low or even negative margins in the retail market.

Unbundling

The Transmission System Operator (TSO) is part of the Swedish State. Hardly any concerns have been raised regarding its independence, even though the State also owns Vattenfall, the biggest electricity company in the region. The idea of merging Nordic TSOs is alive, but not in an active stage at the moment.

There are claims that the distribution companies pass information on customer switching and on meter readings more quickly to their sister supply companies than to other supply companies. Claims are also made that in customer contact there is no clear distinction between the network and the supply function. Some of the large electricity companies have call centers combining network and supply services, which may make it difficult for the customer to see the difference. Companies say that this practice is necessary to provide a good service for customers.

Functional unbundling practices are under development, although the requirements in force are under the Electricity Act. It remains to be seen whether sufficiently non-discriminating behaviour on the part of network companies can be achieved through the current measures.

Powers of regulator

The regulatory authority, Energy Markets Inspectorate (EMI), was established in its present form in 2005. In the beginning the resources of EMI were relatively small. The resources of EMI have been increased considerably since.

Distribution network tariffs

The main pending issue, on which the Commission has sent a reasoned opinion in December 2006, is the ex-post regulation of network tariffs. This in the Commission's view is not compatible with the directive, which requires that at least the method for calculating tariffs has to be approved beforehand.

EMI reviews the network tariffs ex-post. For monitoring they use the so-called "Performance Assessment Model", which has been criticised by many distribution companies. Companies whose tariffs have been inspected and who have bee asked to pay back part of the revenue have systematically appealed to the court against EMI decisions.

The Government has appointed a Commission of Inquiry to propose a legislative framework for ex-ante regulation. The Commission will submit the results of its work in March 2007.

Reserve capacity

Reserve capacity is another issue on the agenda of the Nordic Governments and TSOs. Some years ago the Nordic ministers agreed on the principle that the government should provide an appropriate framework to allow the market to generate the requisite investments. With reducing capacity margins, low levels of rainfall and extreme peak loads due to cold weather the Governments are thinking about additional measures to guarantee capacity adequacy. In Sweden the temporary arrangement where the TSO buys peak capacity comes to an end in February 2008; decision on a longer term solution should be taken by the Government before then.

Building of infrastructure

The Nordic TSOs have agreed on a Nordic Master Plan with five priority projects to be constructed in the first stage. Three of these projects relate to Sweden. There is broad consensus on the importance of these projects. It remains to be seen whether all projects can be finished within a reasonable timeframe, especially the overhead lines designed to relieve the bottlenecks in Southern Sweden.

Gas

Expansion of the gas market

The main issue on the Swedish gas market is expansion of the market. Gas still has low penetration in Sweden, being an option only in limited parts of the country.

Competition on the gas market

There is limited competition on the Swedish gas market. All gas is imported from Germany or Denmark and transported through Denmark. Possibilities of increasing competition thus depend largely on the Danish gas market, which is showing little scope for competition at the moment.

Conclusion

Most market participants take the view that the Swedish electricity market works relatively well, as part of the Nordic market. The most positive are the big generation companies, and the most negative are energy-intensive industries. Small companies are critical, being afraid of the dominance of the big companies.

The gas market is still in its infancy. Only expansion of the network and increased possibilities for gas imports can bring more competition.

Better long-term visibility on fuel mix policy should be achieved.

A solution to the electricity transmission constraints in Sweden affecting the interconnection between Eastern Denmark and Sweden should be found urgently.

The merchant lines towards Germany and Poland should be opened to the market, as required by the regulation on cross-border electricity.

The ex-post regulation of electricity distribution network tariffs should be changed to ex-ante regulation, as required by the directive.

Further unbundling of distribution and retail business should be considered.

Caution should be exercised with any special arrangements for big customers on the wholesale market; they could seriously harm the whole Nordic market, which functions relatively well at present.

Common Nordic market-based principles for the reserve capacity/capacity support issue should be developed, as it is fundamental to investment in generation and demand response.

Great Britain

NB: for Northern Ireland, see Ireland and Northern Ireland Chapter

Main issues

- **Market opening and competition:** for electricity, there would appear to be a sufficient range of companies to suggest that the market is both competitive as well as being open to new entrants. The main development in recent years is the greater degree of integration between the main producers and supply companies. The gas wholesale market in Great Britain is now highly competitive. There are many offshore producers active in North Sea production as well as importers using the interconnector between the UK and Belgium. New import facilities such as LNG terminals and the BBL pipeline will bring some additional competitors to the market.

- **Regulatory authorities:** the Office for Gas and Electricity Markets (Ofgem) has a high level of powers and independence from both the industry and the relevant Ministry. It is also responsible for the application of competition law. The regulator has no competence for cross-border issues. Meanwhile the relevant Ministry is responsible for regulation of offshore gas facilities.

- **Unbundling**: In practice both the gas and electricity transmission companies are fully ownership unbundled and own transmission assets. However, in Scotland, an Independent System Operator (ISO) has been put in place. Some distribution systems are full ownership unbundled, others are part of vertically integrated groups.

- **Transparency:** the British market seems to have achieved a satisfactory degree of transparency.

- **EU integration**: Great Britain can no longer be regarded as an isolated self sufficient market for electricity and gas. Regulatory decisions need to be strongly co-ordinated with neighbouring jurisdictions. If not, there is a continuing risk that inconsistent regulatory frameworks will create perverse incentives for energy companies.

Overview on regulatory framework

This document provides an assessment of the Great Britain (GB) part of the UK gas and electricity markets. Since the implementation of British Electricity Trading and Transmission Arrangements (BETTA) in 2005, England, Wales and Scotland have had common trading rules for electricity. The gas market has, since its inception, been organised on a GB basis. Northern Ireland is covered in a joint report with the Republic of Ireland given that there is a project underway to create a combined electricity and gas market arrangements.

The opening of the electricity and gas markets in Great Britain was carried out well in advance of the requirements of the Directives. The process began in the late 1980s and was concluded when domestic electricity and gas customers were given the right to chose supplier in 1998. The following primary laws are relevant

Electricity Act 1989

Gas Act 1986 (amended 1995)

Utilities Act 2000

Energy Act 2005

There is also a considerable amount of secondary legislation in the form of Ministerial Regulations. In addition, a large part of the requirements of the Directive are set out in licence conditions.

In terms of the key parts of the requirements of the Directives;

full market opening was implemented during 1996-98 by Ministerial Order 752/1996 for gas and for electricity via a Decision of the regulator in line with the Electricity Act 1989;

unbundling of the transmission system operator is set out in its licence requirements issued by the regulator under the 1989 Electricity Act and 1995 Gas Act. The transmission licence prohibits the TSO from having significant interest in an affiliate in the generation and supply business. In practice both the gas and electricity transmission companies are fully ownership unbundled.

electricity and gas distribution systems must be legally separate from generation or supply under the Utilities Act 2000. No single legal person may hold both a distribution and a supply licence. Further conditions relating to unbundling are set out in distribution licences. Some distribution systems are full ownership unbundled, others are part of vertically integrated groups.

The regulatory agency: the Office for Gas and Electricity Markets (Ofgem) was created following the Utilities Act from predecessors OFFER and OFGAS. It has a high level of powers and independence from both the industry and the relevant Ministry. It is also responsible for the application of competition law. Meanwhile the relevant Ministry is responsible for regulation of offshore gas facilities.

Description of the market

The initial position of monopoly provision for gas and electricity production and supply were gradually eroded during the 1980s and 1990s through regulatory action and also new entry into the market. For electricity, decisions of the Competition Commission on merger cases between the main producers and supplier\distributors were an important tool in breaking up monopolies. These decisions often required sale of generation capacity. For gas, the ex-incumbent, British Gas, was required to release gas imported under old long term contracts to other potential market participants. New sources of gas have also been developed over time which further reduced the incumbent's market share. The gas market is currently changing rapidly as Great Britain is becoming a net importer. The future wholesale gas market structure will be strongly affected by decisions being taken now and over the next few years concerning gas import infrastructure.

Electricity market

For electricity, the main participants in the markets are now as follows:

Six companies participate as important producers and suppliers : Centrica, NPower (RWE), Powergen (Eon), EDF Energy, Scottish Power, Scottish and Southern Electricity. No single company has a dominant position.

Several companies participate almost exclusively in the generation market although they may have a few very large clients. The largest of these is British Energy which has around 20% of electricity generation capacity (nuclear), other pure generators are Independent Energy and Drax plc, which owns the largest coal fired plant.

There are now few suppliers outside the largest six companies. However there are many "broker" type services which will act to help customers to choose the best contract structure offered by the main suppliers.

In summary, for electricity there would appear to be a sufficient range of companies to suggest that the market is both competitive as well as being open to new entrants. The main development in recent years is the greater degree of integration between the main producers and supply companies. It is argued that this has reduced liquidity in the wholesale markets and that this may have exacerbated recent market volatility. Wholesale prices in the UK have risen sharply since 2004 and this has fed through in varying degrees into industrial and households price levels.

A number of market participants in the generation and supply business suggest a generally positive view of the main trading arrangements and the part played by both system operators and regulators. Above all, there was no reported evidence of discrimination by vertically integrated distribution\supply companies in dealing with other network users. Some issues were raised in terms of the level of transparency and disclosure in that companies active across the gas market, generation market and with supply businesses were seen to be at a slight advantage is terms of becoming aware of market sensitive information. However recent action by Ofgem to increase transparency at entry points in the gas network was welcomed.

Integration with neighbouring Member States was an area for improvement, including the harmonisation of transmission tariffs and the need for the UK to implement the inter TSO compensation mechanism. Increasing opportunities for companies to participate in intraday and balancing markets were to be welcomed.

Many companies underlined the changing nature of the energy business towards providing more integrated energy services. It was considered that this might lead to an increase in longer term relationships between supply companies and their customers.

Gas market

The gas market has been gradually opened to competition since 1986 and a high level of sophistication in the market has developed. For the majority of the 1990s and until 2003, gas prices at both wholesale and retail level were extremely low. Typically, wholesale prices were between €5-10/MWh (10-20p/therm) and retail prices were the lowest in the European Union throughout.

The gas wholesale market in Great Britain is now highly competitive. There are many offshore producers active in North Sea production as well as importers using the interconnector between the UK and Belgium. New import facilities such as LNG terminals and the BBL pipeline will bring some additional competitors to the market. It is not thought that new infrastructure developments will lead to any particular increase in the degree of concentration.

In the gas downstream market, the six main electricity supply companies also have the bulk of customers. However there are additional suppliers from other gas suppliers in the Commercial market which include incumbents from other Member States such as GDF and major oil multinationals such as Shell, Total, BP and Statoil. Centrica, the ex-incumbent monopolist has an overall market share of the order of 30%.

Since 2004-05, however the UK has been a net importer of gas and there have been concerns in the market that supplies would be short in winter periods. This pushed up the prices of wholesale gas to very high levels by historical standards and also above levels prevailing in some continental regions where gas prices are linked to the oil price. For example, over the whole of 2005, the wholesale gas price was around €30/MWh on average, over 3 times the historical level.

This price increase has brought forward a number of concerns relating to the operation of gas interconnection and the interaction of tarification and balancing mechanisms in different Member States. Different gas quality specifications were also seen as an important issue to be resolved in this context as well as congestion within and between some continental networks. New investment is expected to resolve some of these issues and indeed, during 2006, however, prices have gradually declined and there is now a high degree of convergence between UK prices and those on the continent.

Evaluation of future prospects

There are no real fundamental shortcomings in the way the Directives have been implemented in the UK. Indeed many of the provisions in the UK go well beyond the minimum requirements. There are no reported problems with the degree of unbundling or of the actions of the regulatory authority. There is clearly an active electricity and gas market in the UK which is functioning well.

The market is, however, changing as the UK becomes a net energy importer. Recent events demonstrate that well-functioning markets, do not necessarily always deliver low prices at all times. High prices may be needed to indicate emerging shortages in, for example, natural gas and provide an incentive to efficient investment in new facilities and a signal to consumers to reduce demand. Differences in gas quality standards also have to be taken into account.

This has affected customers' perceptions. There is a general view that the GB market has become less liquid with a more restricted range of offers. For example, although some large customers had been able to achieve price stability in the form of multi-annual contracts, these were often seen as more expensive and that better results were available through short term trading.

Periods when the market is subject to such tensions also expose second order issues which may be hidden during periods of plentiful supply. This would appear to be the case in the Britain at present judging by the reactions of customers to high price levels. Equally, the transition to import dependency brings about a need to ensure a much higher level of consistency and coherence between the decisions of Ofgem and neighbouring jurisdictions. This was not necessary in the past when such issues could be marginalised without causing any undue effects on customers.

One issue that has emerged is that industrial customers consider there to be a number of implicit cross subsidies in favour of households including metering arrangements and a

reluctance of the main suppliers to rapidly pass on wholesale price increases. While smaller business customers also point to the protection given to household customers whereby supply companies are obliged to publish standard tariff formulae which have to be offered to all customers. By contrast, their view was that they were often expected to "fend for themselves" in negotiations with supply companies or use brokering agencies.

However, current market conditions should not distract from the fact that British customers have, over the years, derived a very high level of benefit from the introduction of competition and the surveillance of the market by a strong independent regulator. Many of the factors currently affecting gas and electricity prices are temporary in nature and it is expected that the completion of major infrastructure projects will subsequently lead to some reduction in wholesale prices from existing levels.

Conclusion

Britain can no longer be regarded as an isolated self sufficient market for electricity and gas. Regulatory decisions need to be strongly co-ordinated with neighbouring jurisdictions. If not, there is a continuing risk that inconsistent regulatory frameworks will create perverse incentives for energy companies. This may lead to ongoing effects on British gas prices. Without a tighter supply-demand position there is also a case for bringing remaining areas such as offshore gas production, under the supervision of Ofgem. This could encourage, for example, consistency in the level of transparency between the electricity and the gas sector.

Development of active demand side participation needs to be given at all levels of consumption. Differing treatment of commercial versus household customers in terms of metering arrangements should be re-examined. More frequent meter reading should be encouraged, including the use of smart metering technology. This could reduce the volatility associated with, for example, winter peaks in gas demand.

A continued high degree of vigilance is required over the selling practices of supply companies. Customers should have contract terms clearly explained and know exactly the conditions they are signing up to.