

Proposals for Implementation of the European Target Model for the Single Electricity Market Consultation Response

Dalkia Limited
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Introduction

Dalkia, as part of the Veolia Environment environmental services group, is the leading European Energy Services Company (ESCo) with a turnover of €8.14bn and employing 52,560 energy and service delivery professionals in 42 countries. Dalkia operates in areas such as industrial energy efficiency, heating & cooling networks, global building energy management, biomass and energy conversion efficiency such as combined heat and power.

In Ireland, Dalkia has over 450 full time employees with a turnover of €87m operating, identifying and implementing energy efficiency opportunities in the healthcare, pharmaceutical, public, hi-tech, food & beverage and industrial sectors. This is done through the generation of utilities such as electricity and heating, as well as the operation and maintenance of energy & utility plant, and associated efficient energy & utility management services. In 2008, Dalkia was overall winner of the SEAI award for Coordinated Energy Management Programme Small/Medium User with Vodafone and in 2010 Dalkia was awarded the Best Energy Service Project in the Public Sector from the European Energy Service Initiative for our work in Stewarts Care Ltd, a hospital group in Dublin.

Our key managers are regularly invited to speak at leading energy conferences, as well as contribute opinion on developments and their potential impact on customers in the energy / environmental arenas.

Executive Summary

Dalkia welcomes the opportunity to respond to the potential changes to the Single Electricity Market (SEM) and view the greater integration of the electricity markets across Europe as a key ingredient in the promotion of competition in the sector, and thus minimising costs to consumers. We would also say that, although Dalkia has limited experience in operating in the SEM, we do believe that its current market arrangement in Ireland has been beneficial for customers. It is imperative that, by integrating the SEM into the Target model, it does not introduce barriers which may lead to reduced competition and ultimately increased costs for consumers.

The Capacity Payment Mechanism (CPM) is an integral element in reducing pool price volatility and encouraging investment in generation. Pool price volatility is a significant concern for participants, especially with the advent of greater levels of intermittent generation, leading to larger swings in the System Marginal Price (SMP). Currently, the electricity market is driven by seasonal variations; however, the integration of large amounts of intermittent generation will mean the market becomes tied to the vagaries of the weather, leading to even greater swings in the SMP. ^[1] Dalkia would view the retention of the CPM in some form as critical to encouraging investment in flexible generation to cope with intermittency, and still maintain supply to customers at the best price. Dalkia does acknowledge that the review of the Capacity Payment Mechanism decision document ^[2] did not propose any substantial change to the CPM and also view positively the discussions currently taking place across Europe in regards to the development of capacity markets.

¹ ^[1] How Wind Variability could change the shape of British and Irish Energy Markets, Poyry, 2009
<http://www.uwig.org/ImpactofIntermittency.pdf>

² ^[2] "CPM Medium Term Review," SEM, 06Mar12,
http://www.allislandproject.org/en/cp_decision_documents.aspx?article=5ce2db5f-6c79-4454-9779-53dd7fae8dba

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As previously noted, ensuring the system has enough flexibility to cope with increased levels of intermittent generation is viewed by Dalkia as being vitally important. Flexibility provided by demand side participation, aggregated generation and storage can play an important role in introducing flexibility and should be considered an important element of the market. Every effort should be made to ensure that, by implementing the Target model; the promotion of said concepts is not unduly limited.

If changes are required to the CPM to ensure compliance with the Target model, then Dalkia would suggest as an option a forward capacity market, similar to that of ISO New England's forward capacity market and the PJM Reliability Pricing Mechanism. These forward capacity markets promote adequate levels of suitable generation capacity, as well as enable significant demand side participation. ^{[3][4]} These two capacity market options are similar to that proposed for the UK; ^[5] however, it is not clear at this time if the UK proposal will have provision for significant demand side participation, or if the correct type of generating capacity is rewarded to meet increased intermittency. ^[6]

Dalkia would recommend also that any changes to the capacity payment should be such that those generators and demand side sites who can provide the greatest level of the flexibility to the system should be rewarded to a higher degree. This is to ensure that there is sufficient resource adequacy to meet increased intermittent generation. ^[6]

There is some flexibility currently contained within the system via the ancillary services payment mechanism, but Dalkia would encourage the introduction of an ancillary services market to encourage more participation, specifically for flexibility. ^[7]

To encourage demand side participation in the market, real time pricing is a vital element in its promotion and it is acknowledged that the SEM Committee has pledged in the Demand Side Vision 2020 paper to introduce firm day ahead pricing in the SEM, in order to promote demand side participation. Certainly, we would view aspects of the Target model which enable this function, as important steps in the right direction. ^[8]

³ The Role of Forward Capacity Markets in Increasing Demand-Side and Other Low- Carbon Resources: Experience and Prospects, *M Gottstein, L Schwartz, 2010*
<http://www.roadmap2050.eu/attachments/files/PolicyBriefMay2010RM2050%5B4%5D.pdf>

⁴ "Review of PJM's Reliability Pricing Model (RPM)", Brattle Group, 2008
http://www.brattle.com/_documents/UploadLibrary/Upload696.pdf

⁵ "Planning our electric future: technical update", Department of Energy and Climate Change, 2011
<http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/energy-markets/3884-planning-electric-future-technical-update.pdf>

⁶ "Beyond Capacity Markets - Delivering Capability Resources to Europe's Decarbonised Power System" *M. Gottstein, Principal, S. A. Skillings, 2012*, <http://www.raponline.org/document/download/id/4854>

⁷ Harmonised All-Island Ancillary Services Policy <http://www.allislandproject.org/en/transmission.aspx?article=3a949ba3-0307-4850-8ecd-eab261fedd64>

⁸ "The Internal EU Electricity Market: Implications for Ireland", Paul K. Gorecki, 2011, page 92
<http://www.esri.ie/UserFiles/publications/RS23.pdf>

Dalkia Response to Consultation Document Questions

Sections 3 & 4

Q1. Do you agree that the SEM has met its objectives to date?

Dalkia do not have sufficient experience in operating in the SEM to be able to provide a suitably adequate response to this question, other than to say that it is our view that the SEM arrangement in Ireland has been beneficial for customers, which is welcomed.

Section 6

Q2. What elements of the SEM design can and should be retained when implementing the Target Model in Ireland and Northern Ireland?

The Capacity Payment Mechanism (CPM) is an integral component of price stabilisation and the promotion of investment in generation, and should be retained in some form when implementing the Target Model. The CPM has a stabilising affect on any spikes in the SMP brought about by high levels of intermittent generation. The effect of removing the CPM would mean that energy producers would have to recoup their costs based solely on the energy price, thereby increasing price volatility.^[9]

As noted in section 6.3 of the Consultation Document, “*The primary duty of the SEM Committee is to protect the interest of consumers across the island of Ireland through the promotion of competition...*” By removing the CPM, and given the variability intermittent generation brings, the future operating profile of conventional plant would be significantly altered. This would require them to operate for shorter periods of time, therefore being forced to recoup their operating costs within a narrower time frame, thus significantly increasing the bid price.^[10] The removal of the CPM could also lead to increased difficulties in sourcing finance to fund investment in new generation. This would reduce the number of new entrants, thereby limiting system flexibility, competition and ultimately bring increased prices for consumers.^{[11][9]}

Q4. Do you agree with the SEM Committee assessment framework proposed above?

“Flexibility” should be included in the Assessment Framework. With the advent of increased intermittent generating capacity, ensuring that there is sufficient flexibility in the system to accommodate this intermittency is critical. Flexibility provided by ancillary services will become integral to the secure operation of the grid and therefore should be included in the criteria. Demand side participation, together with aggregated generation and storage can provide flexibility and therefore should be considered an important part of the market.^{[12][13]}

⁹ “The Internal EU Electricity Market: Implications for Ireland”, Paul K. Gorecki, 2011, <http://www.esri.ie/UserFiles/publications/RS23.pdf>

¹⁰ “Integrating intermittent renewables sources into the EU electricity system by 2020: challenges and solutions” Union of the Electricity Industry–EURELECTRIC, 2010, <http://www.eurelectric.org/PublicDoc.asp?ID=63539>

¹¹ <http://www.esri.ie/UserFiles/publications/RS21.pdf> “A Review of Irish Energy Policy” ESRI 2011, Page 20

¹² CAPACITY PAYMENT MECHANISM MEDIUM TERM REVIEW, Poyry, 2011, Page 50 & 81 http://www.allislandproject.org/en/cp_current-consultations.aspx?article=31822151-f6da-4f5a-9fba-61739dd35f98

¹³ Harmonised All-Island Ancillary Services Policy <http://www.allislandproject.org/en/transmission.aspx?article=3a949ba3-0307-4850-8ecd-eab261fedd64>

Q5. Is the ranking of criteria/objectives the right one? Is the application of weighting factor appropriate? What weighting would you give each one?

Dalkia would agree with view that the “Protection of Consumers” should be a Primary Objective, but would also include “Competition” as a Primary Objective. We believe that the protection of consumers could be potentially impacted when there is an absence of adequate competition and would lead to higher costs.

Q6. What other criteria, if any, should the SEM Committee apply when making its decision on implementing the Target Model?

“Flexibility” should be included in the Assessment Criteria. See response for Section 6, Question 4 above for more detail.

Section 8

Q1. Should the SEM be replaced by a completely new set of electricity trading arrangements in 2016?

Dalkia’s view would be that the existing market design (SEM) should be retained as much as is practicable. When the SEM was developed, it was done so with the view to encourage supply at minimum price. Replacing the SEM with a completely new set of electricity trading arrangements in 2016 could bring about significant uncertainty amongst generators, especially for those who have invested heavily in recent years. The SEM market arrangement as is provides the right signals for new investment, ensuring adequate levels of flexible generation at least cost, to cope with the altered demand profile brought about by intermittent generation. The concern would be that investment in flexible generation could diminish if the existing SEM is altered to a high degree, with the potential knock on effect of increased prices for consumers.^[14]

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¹⁴ “The Internal EU Electricity Market: Implications for Ireland”, Paul K. Gorecki, 2011, page 75 & 80
<http://www.esri.ie/UserFiles/publications/RS23.pdf>