

AEMC staff paper
SRG meeting - 28 May 2012
Session 3: Supply chain interactions

Purpose

This paper provides background information to session 3 of the SRG meeting on 28 May regarding supply chain interactions. The purpose of the SRG discussion is to consider:

- Extent of the problem relating to coordination across the supply chain;
- The suite of potential options that could be considered to improve coordination and facilitate parties to take up efficient DSP;
- How those options should be assessed (i.e. stress tested).

1 Where are we at – reforms?

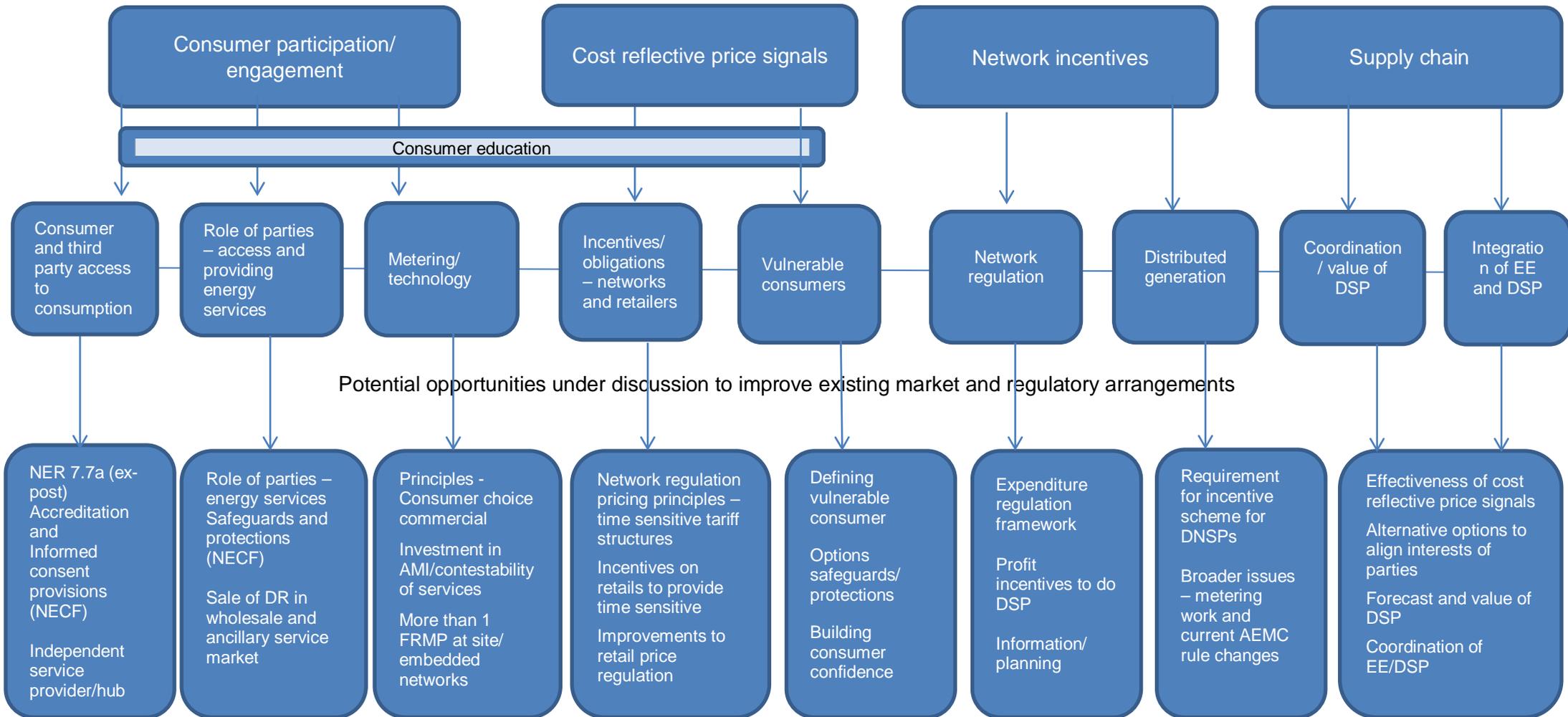
In the directions paper we identified a range of opportunities to improve market conditions required to facilitate efficient DSP. Under each of these key areas, there are a range of reforms being considered to the existing commercial and regulatory arrangements which are the focus of the current phase of the review (draft report) and SRG discussions.

A mud map of high level areas, sub issues and options for reform to improve market and regulatory arrangements under discussion in the current phase of the review is presented below.

It is important to note the mud map is provide SRG members with an overview of all the conditions, issues and options, these link and intersect with each other. Please note that the suites of options put forward in submissions to the directions paper have not been canvassed in the mud map due to timing constraints. There will be a presentation of summary of stakeholder submissions at the SRG meeting.

AEMC staff paper
SRG meeting - 28 May 2012
Session 3: Supply chain interactions

Umbrella areas and conditions identified to facilitate efficient DSP



AEMC staff paper
SRG meeting - 28 May 2012
Session 3: Supply chain interactions

2 Supply chain interactions - consideration of broader options?

Chapter 7 of the directions paper canvassed the nature of DSP, and coordination between parties of the supply chain and how the supply chain collectively should support efficient DSP. We also highlighted the potential merit in standard approaches for valuing and forecasting the impacts of DSP to overcome transaction costs and information asymmetries between parties.

We concluded that there is a potentially issue about how parties coordinate, forecast and value DSP options and align commercial interests to deliver an efficient market outcome.

The mud map of areas, sub issues and options are the improvements which are being considered to improve and support market conditions for consumers and other parties to take up DSP.

As canvassed in the directions paper, a key question for the review is to what extent is the mix of commercial and regulatory arrangements, specifically, cost reflective price signals are likely to align the interest of parties so as to package up a “product” which consumers see value in and will take up the DSP option? Secondly, are and what alternative or additional solutions needed in absence of fully cost reflective price signals?

In the directions paper, we noted that if all consumers received fully cost reflective prices, the value of DSP would be clear and transparent. However, we also pointed out that while prices are necessary, they are not a sufficient condition for consumer decision making as they are only one component of decisions on when and how much to consume. It is recognised that other conditions are needed to help inform consumer choices, such as capability to respond, information about cost impacts of consumption, technology platforms and the flexibility to choose based on preferences/circumstance.

It is recognised that there are a number of constraints that exist in achieving fully cost reflective price signals and it is likely that achieving the ultimate outcome may be not feasible. Constraints or issues that have been noted in SRG discussions include:

- A change to both metering and settlement arrangements would be required to fully expose mass market consumers to cost reflective tariffs.
- Differing drivers for different parties – for example, share of intermittent generation may create divergence in value of DSP for network¹ and retailers² (As the share of intermittent generation increases - peak energy prices will be driven by demand net of wind, while peak energy flows will be driven by demand).
- Existence of material transaction costs – the way in which energy markets, balancing markets and network regulation and charging are organised.
- Equity with having fully cost reflective network charges - i.e. very varying distribution charges at the same voltage and within a single region served by the same distribution company.

¹ Network companies are incentivised to use DSP to reduce peak network flows for fairly short periods. Peak transmission and distribution flows are partially but not fully coincident.

² Energy companies are incentivised to minimise energy charges by shifting demand from peak to off-peak periods throughout the year, although these incentives are greater during short lived spikes in wholesale prices including by shifting it to lower price periods.

- Lack of information to consumers to assist with optimising DSP use, and
- Access to capital and split incentives at the consumer level.

All these and other factors (concerns about consumer protections, consumer behaviour and preferences etc) mean that there is likely to be practical constraints on moving to fully cost reflective pricing. As such this will make it harder for consumers or their agents to manage and DSP related transactions. Consequently, there is going to be a need for another other way that consumer can obtain the DSP value or some party is incentivised to seek out highest value of DSP.

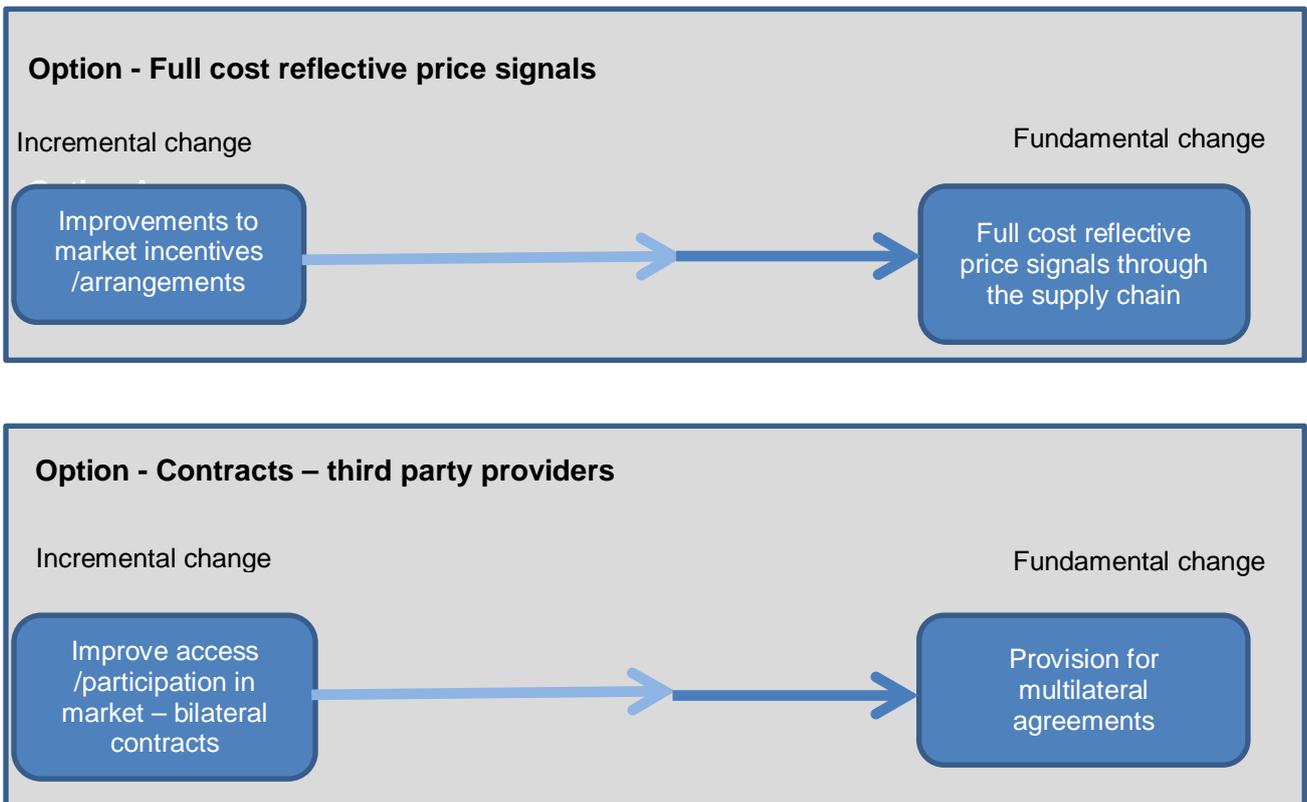
Spectrum of options

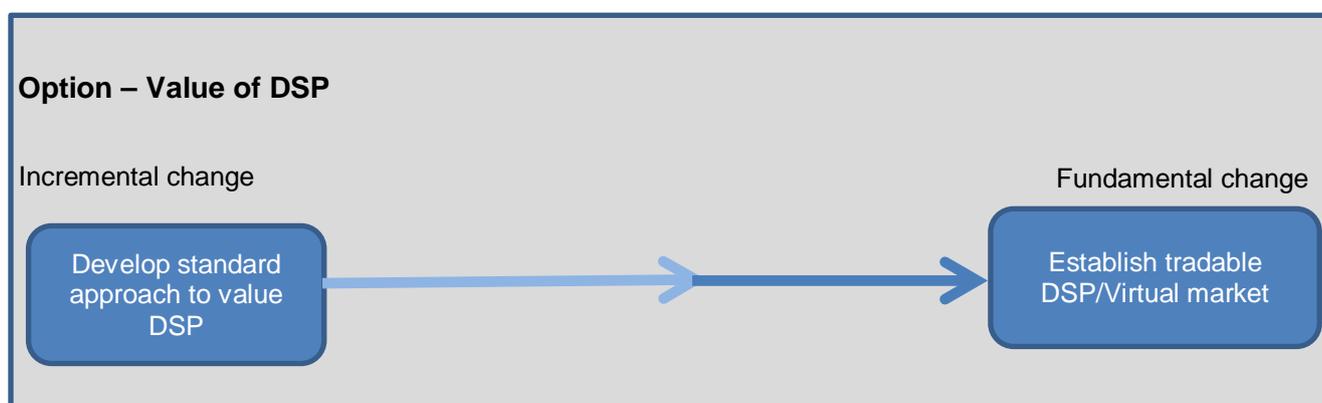
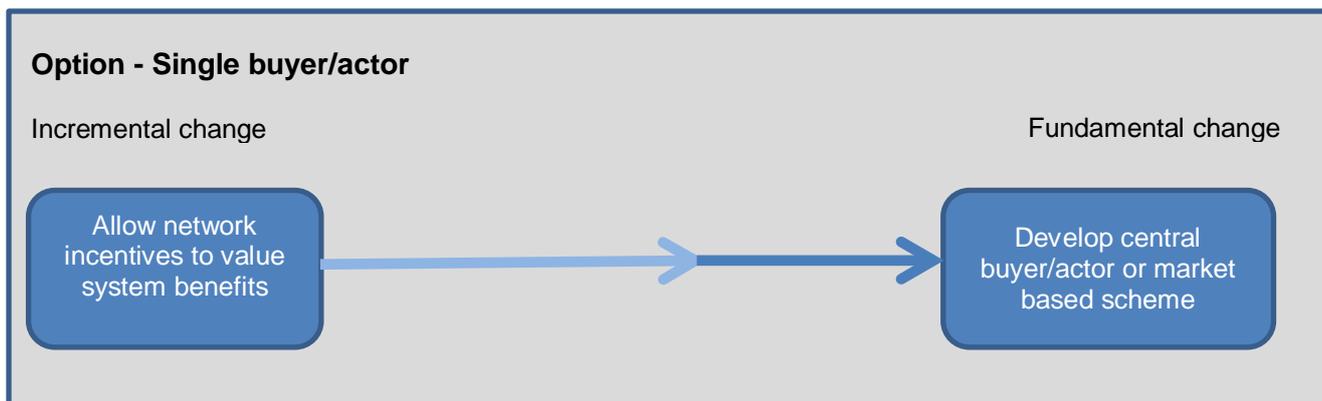
In the directions paper, we canvassed some potential ways that could be considered to achieve co-ordination between multiple parts of the supply chain. Figure 1 outlines the options put forward the directions paper, including that of improving cost reflective price signals.

Each option is presented as spectrum, starting at the incremental improvements that could be made to the existing market arrangements (under consideration), to the more alternative fundamental regulatory reform options that could be considered. Please note that each of the options still require detailed consideration and analysis. These are presented to canvass SRG views on materiality of supply chain issue and options that may be canvassed. In the next section we ask a number of questions for the SRG to consider, including how such options might be assessed moving forward.

To inform discussion among SRG members we have also provided some of the potential pros and cons of fundamental reform options ([Attachment A](#)). Note that the comments arising from submissions have not been canvassed in the pros and cons outline given timeframes.

Figure 1 Spectrum of options for consideration





3 Materiality of issue and assessment of options

As noted, the starting point is consider is how far can cost reflective price signals align interests and deliver efficient market outcomes. We note that before any assessment is made, there is a need to:

- ensure that each option and sub options are defined in sufficient detail that provide clarity for consideration and analysis; and
- develop an appropriate assessment framework and criteria (i.e. general cost benefit framework including potential scale of the static and dynamic efficiency gains. Consideration of direct and indirect costs, including any loss of amenity to consumers).

At the meeting on 28 May, we are seeking SRG discussion on:

1. ***Views on materiality of the problem – are alternative solutions required? Are improvements to cost reflective price signals likely to align incentives/interests of parties across the supply chain?***
2. ***Potential alternative solutions - consideration of the extent options address existing issues and address the problems identified. Pros and cons put forward, others?***
3. ***Stress testing potential suite of solutions – what should be the parameters of analysis?***

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Attachment A: Spectrum of options - Pros and Cons

Fundamental reform options for achieving coordination across supply chain	Pros	Cons
<p>Fully cost reflective pricing to consumers by suppliers</p>	<p>Communicate in a transparent manner the value of DSP - provides incentives for change in consumption pattern</p> <p>May overcome some contracting issues - likely improve the environment for DSP service providers to emerge and to enter into market contracts across the supply chain.</p>	<p>Likely to result in higher level of consumer risk (at least for vulnerable consumers). For example - Uncertainty surrounding the potential pay-offs for consumers who choose to participate in DSP. If there is uncertainty about future electricity tariffs, consumers may hesitate to support new investment in long-lived, capital intensive DSP. Hence this could reduce the pool of consumers wanting to participate in the DSP option, to those consumers who can manage such risk.</p> <p>May be more effective at achieving efficient DSP to respond to energy and transmission costs than efficient DSP to respond to distribution costs.</p> <p>Requires changes to metering (installation of interval meters at a minimum) and settlement.</p> <p>Price responsive DSP is likely going to be difficult to forecast – based on consumer behaviours</p>
<p>Provision for multilateral agreements</p>	<p>May improve coordination and deal with parties who have different interests.</p> <p>Third parties may be better placed to demonstrate to consumers how changes in consumption – and technologies that assist in this regard – could save money and achieve attractive paybacks.</p>	<p>May create even more complexity for the consumer.</p> <p>Need to consider the requirements for DSP and the existing (bilateral) contractual arrangements – distribution, transmission, and wholesale market.</p> <p>Consider of how third parties may be regulation – arrangements/framework required.</p> <p>Consideration of contract provisions – standard terms of agreement.</p>

<p>Single buyer/actor scheme</p>	<p>Provides a positive incentive for a business to promote DSP - overcome the split incentives and free-rider problems.</p>	<p>May create preserve incentives and close off competition in market – favouring of contractors</p> <p>Introducing possible compensation mechanisms via the wholesale market may increase the complexity of dispatch and settlement and add to the costs of the system operator.</p> <p>Need to consider how benefits of DSP are valued to ensure all the benefits of the DSP action can be captured by the consumer who wishes to sell the DSP option.</p> <p>The analysis will need to consider proxy is well aligned with cost drivers. E.g. In regions with high penetration of intermittent wind there may be a reducing alignment between peak network flows and peak energy prices. There is also a risk that it is not fully aligned with reducing distribution costs.</p>
<p>Virtual DSP market</p>	<p>Provide standardised/transparent value for DSP.</p> <p>Decreasing transaction costs</p>	<p>Virtual market likely to be very complex to implement and unclear how such a mechanism may work in practice.</p> <p>Considerations of underpinning regulatory framework/rules</p> <p>Need to determine meaning of 1 MW value of DSP.</p>