

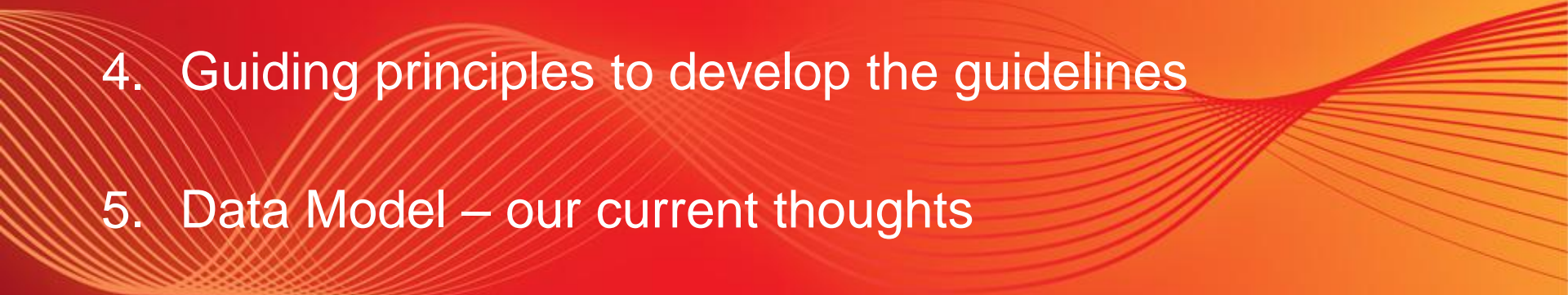
DEMAND SIDE PARTICIPATION INFORMATION GUIDELINES

12 September 2016

PRESENTED BY FORECASTING

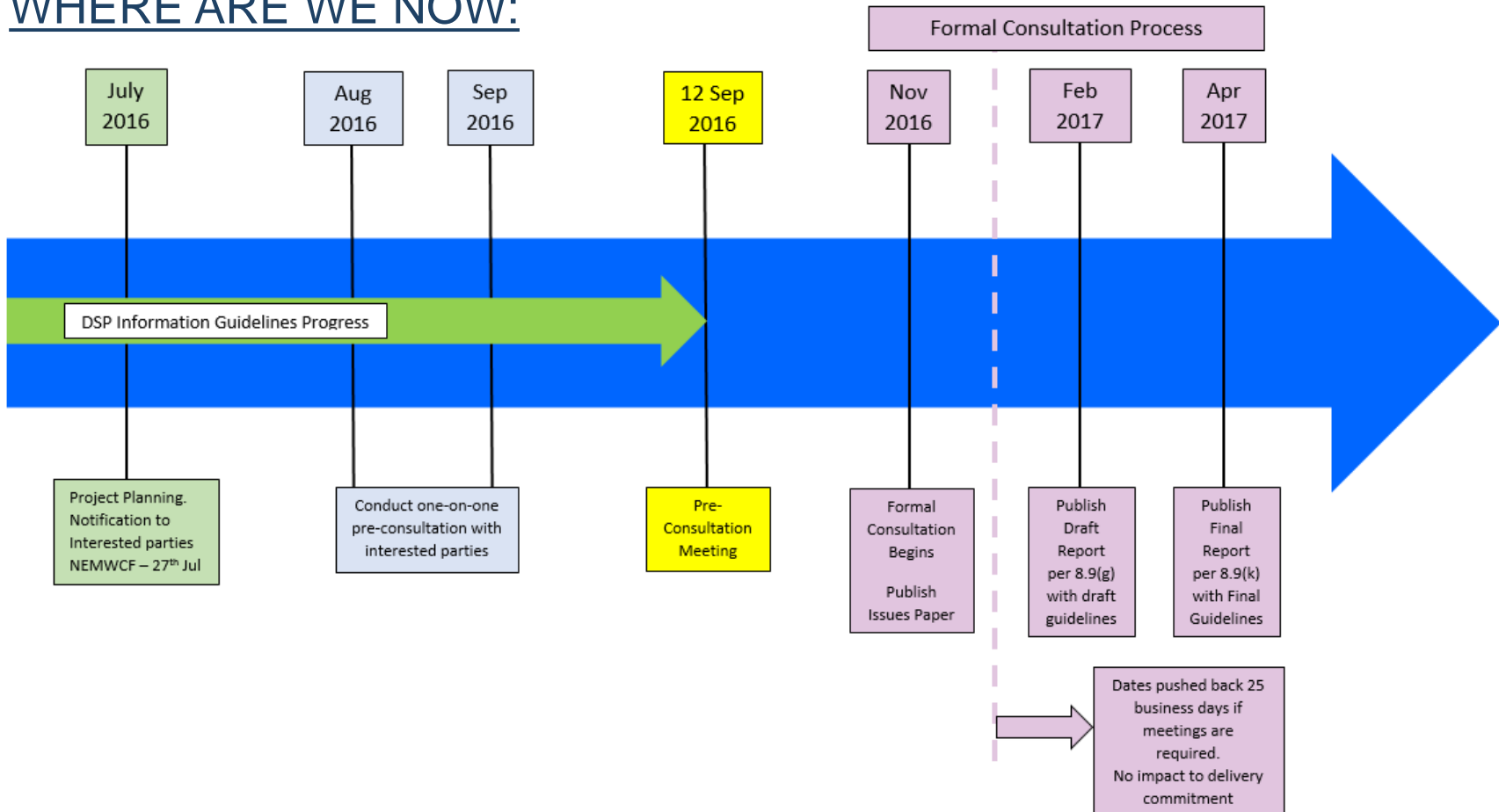


AGENDA

1. Consultation Process
 2. Scope and Purpose
 3. Stakeholder Feedback
 4. Guiding principles to develop the guidelines
 5. Data Model – our current thoughts
 6. Discussion of themes and issues
- 
- A decorative graphic at the bottom of the slide consists of multiple thin, overlapping wavy lines in shades of red and orange, creating a sense of movement and depth.

CONSULTATION PROCESS

WHERE ARE WE NOW:



- What is the scope?
 - Who will the guideline apply to?
 - Registered Participants, such as: Network service providers
 - Retailers
 - Non-scheduled generators
 - Small generation aggregators
 - What data will be required?
 - When will the data be required?
 - How will the data be collected?
- What is AEMO's purpose?
 - To better understand the changing demand trends across different customer categories to ultimately improve AEMO's load forecasts
 - Types of forecasting:
 - Energy Forecasting
 - Connection Point Forecasting
 - Operational Forecasting
- What reporting will AEMO do?
 - AEMO must annually publish the extent that the information received has informed AEMO's development or use of load forecasts.

STAKEHOLDER FEEDBACK



The below collection of stakeholder comments were provided during pre-consultation:

DSP Consultation Expectations	<ul style="list-style-type: none">• Simple process• Useful + workable• Incremental Approach• Use existing surveys as base• Not resource intensive• No duplication across surveys and/or requirements• Understand: - which forecasts are impacted<ul style="list-style-type: none">- process- how we treat different customer types
Existing Data	<ul style="list-style-type: none">• Varying impact on different participants• Limited register of batteries (or none)• Categories include:<ul style="list-style-type: none">• Load control for networks• Economic / Benefit Sharing (Spot price share, cap price)• Drivers for each customer not always known• NMIs stored for customers with price incentives or exposure• Use NMIs to avoid double counting DSP response• Critical peak days – notification fairly simple, logging may be an issue

The below collection of stakeholder comments were provided during pre-consultation:

Data Availability	<ul style="list-style-type: none">• Difficult to validate data• Be specific around data requirements to avoid reworking• Varying degrees of ability to automate data extraction• Data in contracts – relatively easy to pull data out, and not a huge number of these.• Some control systems make data retrieval difficult• Customer classification stored – but may be inaccurate• Validation of data by AEMO is supported• AEMO forecasts become stale – increased data freq• In first year, allow some free-form options, ie <i>Other</i> style fields• Need to consider future developments (electric vehicles)
Industry Benefits	<ul style="list-style-type: none">• Publishing aggregated data is supported• Improved forecasts for regulatory processes• Improved MT-PASA• Better informs participants for spot trading• Better information reduces assumptions that may be costly• Min load is also very important for networks

STAKEHOLDER FEEDBACK



The below collection of stakeholder comments were provided during pre-consultation:

Costs and Confidentiality	<ul style="list-style-type: none">• Over regulation may stifle DSP development or investment• Data aggregation required to maintain competitive advantage• Diminishing returns for increasing collection frequency for some data• Upfront versus ongoing costs need to be considered
Future DSP	<ul style="list-style-type: none">• Trials occurring but very early yet - unsure what data participants themselves will collect• How to differentiate a trial from a trend?
Other	<ul style="list-style-type: none">• Consideration of other competing processes (DAPR, metering competition, COAG proposals ie battery register)• DSP data in Pre-Dispatch and Dispatch – may affect response due to circular nature• Data is needed to demonstrate DSP is occurring – creates business opportunities

Principles include:

- Clear requirements
- Simple process
- Incremental Approach
- Avoid seeking data that won't be used
- Automated to some extent
- Avoid data collection duplication
- Consideration of upcoming rule changes
- Value / Cost and Impact

- Primary focus is on intra-day demand response, either due to price signals or network loading
- Quantitative data captured wherever possible
- Data model broken into two sections:

Section 1: DSP Customer Types	<ul style="list-style-type: none">• Lists of NMIs where various types of DSP are present• Allows AEMO to perform targeted analysis on subsets of customers
Section 2: Larger loads and programmes	<ul style="list-style-type: none">• Specific detail on individual or aggregate customers• Enables more accurate modelling of customers with significant levels of response

- Section 1 involves the collection of lists of NMIs for a selection of different types of DSP:
 - Customers with exposure to the wholesale price
 - Time-of-use tariffs
 - Network event tariffs (eg. critical peak days)
 - Network controlled load (eg. air conditioner switching)
 - Battery storage
- All customer categories are included in this section (residential, commercial, industrial)
- Using NMIs allows AEMO to avoid double counting responses from different participants

- Section 2 of the data model collects specific information on demand response above 1 MW:
 - NMI, location and size of potential response
 - Category of response (load reduction, embedded generation, energy storage)
 - Detail on price responsive load (type of tariff, trigger conditions)
 - Control logic (what would trigger a response, who can activate it)
 - Energy storage capabilities (capacity, constraints, purpose)
 - Historical event timing, information on monitoring capability
 - Restrictions on response (seasonality, temperature limits, programme or contract expiry)
- Applies to industrial and commercial load, as well as aggregated residential demand

- Examples of DSP that may be relevant to Network Service Providers:
 - Large industrial load including embedded generation, contracted to provide support at times of high network loading
 - Household air conditioners that can have their demand reduced via a smartmeter or ripple control
 - Battery storage installed on a feeder to reduce peak demand
- Examples of DSP that may be relevant for Retailers:
 - An industrial load with a wholesale spot price passthrough contract
 - A distributed group of batteries that are remotely controlled by the retailer
 - Residential properties on a time-of-use tariff
- Residential batteries:
 - It is acknowledged that currently the location of residential batteries is not always known to networks and/or retailers
 - NMIs of premises captured in section 1
 - Data only captured in section 2 if operating as part of an aggregate storage system controlled by a third party

For discussion:

1. Frequency, timing, and commencement
2. Submission method
3. Accuracy of data
4. Impact from future rule changes
5. Privacy and confidentiality
6. Cost of compliance

Discussion point 1: Frequency, timing, commencement

- Do participants consider annual collection reasonable?
- How does twice annually (for seasonality) increase costs?
 - Does it capture seasonality? or improve data for system security?
- When are new incentives derived to capture market customers?
- What time of year should be avoided if possible?
- What other issues should AEMO consider regarding commencement?

AEMO will limit duplication of requests where possible, provided timing and rules allow.

Discussion point 2: Submission Methodology

- What options would participants like AEMO to consider?

For each:

- What are benefits?
- What are the risks?
- What are the costs? (ongoing versus upfront)

Discussion point 3: Data Accuracy

- NMI's will allow cross checking, and avoids double counting
- What should AEMO consider?
- What risks to participants see?
- What is the quality of the data you currently store?

Discussion point 4: Impact from future rule changes

- The outcomes from this process will likely inform future rule making process. Examples are:
 - Demand Response Mechanism and Ancillary Services Unbundling (draft determination)
 - Energy Storage Registration (COAG paper)
 - Non-scheduled generation and load in central dispatch

Discussion point 5: Privacy and Confidentiality

- Confidentiality was a key issue during the development of the new rules.
- AEMC considered that National Electricity Law 'protected information' provisions were adequate.
- Participants may submit information 'in confidence'.
- AEMO is permitted to disclose information in limited circumstances, such as after aggregation, or for the proper operation of the market.

What issues do participants see?

NEXT STEPS



AEMO has setup a website to store consultation information. The link is:

<http://www.aemo.com.au/Stakeholder-Consultation/Consultations/NEM-Demand-Side-Participation-Information-Guidelines-Consultation>

By end of November:

- AEMO will publish an Issues Paper
- Formal Consultation will begin