

I-SEM Aggregator of Last Resort Framework Consultation

Industry Presentation

16th December 2014

Agenda

- Responses to the Draft Decision
- The HLD Decision
- The AOLR Consultation Paper
 - The Functions of the AOLR
 - The Potential AOLR Models
 - Worked Examples of each Model
 - Governance (Framework Establishment & Procurement)
 - Service Provision
 - Incentives and Cost Allocation
 - Participant Eligibility
- Next Steps
- Discussion

Responses to the Draft Decision

Major Issues raised:

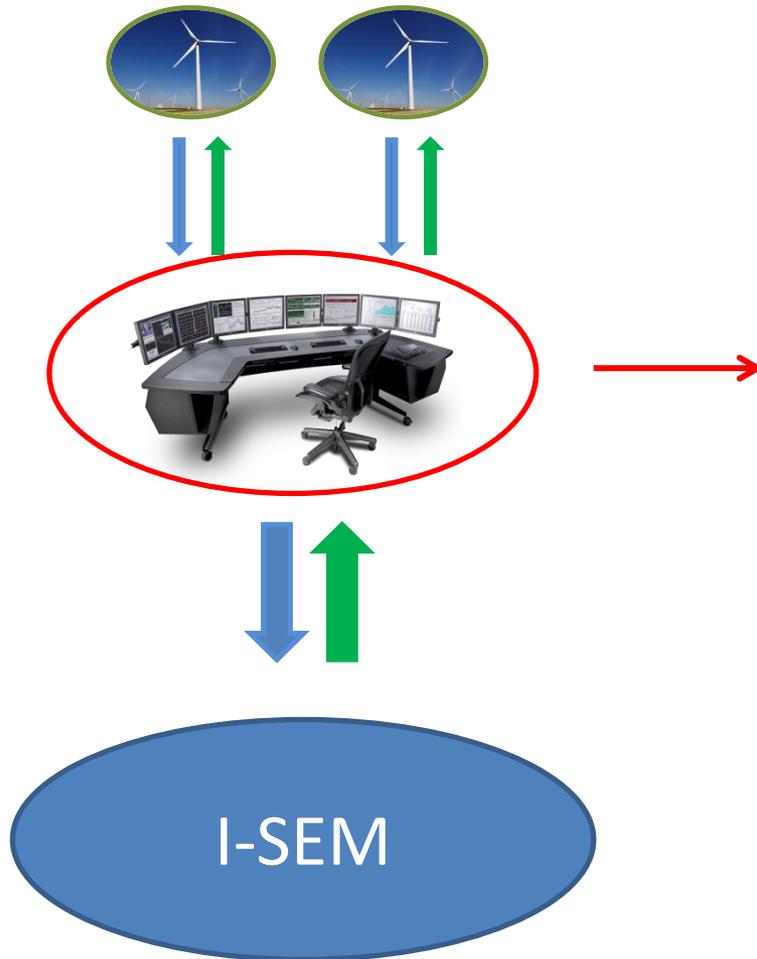
- Some respondents questioned whether AOLR should be enduring as opposed to a transitional approach
- Respondents in general were not in favour of any conventional generation being able to avail of AOLR services
- Mixed response to who should be the AOLR – commercial entity or the TSO. Conflict of interest concerns, risk of crowding out entry of commercial entities

The I-SEM High Level Design

Decision Paper

'The I-SEM will include a transitional mechanism to help smaller players to access the market in ex-ante timeframes without necessarily needing to invest in trading capability of their own. This aggregator or offtaker of last resort will help to mitigate particular risks for smaller players in transitioning to a new market design based on their active participation. The existing role of intermediaries will continue to be facilitated.'

The AOLR Consultation



Key Issues

What functions will the AOLR perform?

How will the AOLR perform these?

Who should be the AOLR?

Who should procure the AOLR?

Who should participate?

Functions of the AOLR

Four potential AOLR functions set out in the consultation.

1. The AOLR trades in the DAM and IDM on behalf of eligible generators.
2. The AOLR pools the risk equally across the portfolio
3. The AOLR assumes market responsibilities
4. AOLR performs operational obligations

Proposed AOLR Models

Three AOLR models proposed based on a combination of the functions outlined.

- The Portfolio Settlement Aggregator
- The Individual Settlement Aggregator
- The Passive Aggregator

Working Assumptions

Assumptions:

- a) AOLR has contracted with 3 wind farms for 260MW. WF1 = 110MW, WF2 = 80MW, WF3 = 70MW.
- b) The AOLR is a price taker in DAM and BM,
- c) The AOLR trades 3 equal volumes in the continuous IDM,
- d) The AOLR fee is not considered,
- e) Each generator has 100% technical availability,
- f) Bids are based on a single all-island forecast

Potential AOLR Models

Portfolio Settlement Aggregator

- Performs all of the functions outlined
- The AOLR will actively seek out optimal revenues based on information available to it
- All revenues are pooled and distributed pro rata to all participants
- The AOLR is party to the market code
- The AOLR submits physical notifications to the TSO

Worked Example of Portfolio Model

At the DAM

- AOLR submits 100MWh based on forecast for that period
- DAM price clears at €60/MWh

At the IDM

- AOLR sells 20MWh in 3 separate trades based on improved forecast
- Each trade has a volume of 6.67MWh
- Trade 1 is sold for €70/MWh, trade 2 for €60/MWh, trade 3 for €55/MWh

At the BM

- Physical Notification is 120MWh.
- Metered output of AOLR is 110MWh
- 10MWh is purchased in the BM.

Worked Example of Portfolio Model

Total Revenues are:

Portfolio Based Approach					
		WF1	WF2	WF3	Market Price
Quantity (MWh) in each Market	DAM	42.31	30.77	26.92	€ 60/MWh
	IDM	2.82	2.05	1.79	€ 70/MWh
	IDM	2.82	2.05	1.79	€ 60 /MWh
	IDM	2.82	2.05	1.79	€ 55/MWh
	BM	-4.23	-3.08	-2.69	€ 65/MWh
Metered output (MWh)		46.54	33.85	29.62	
Total Revenue €		€ 2,785.35	€ 2,025.25	€ 1,771.50	
Average Payment €/MWh		€ 59.85	€ 59.85	€ 59.85	

Individual Aggregator Model

Individual Settlement Aggregator

- Same as portfolio except that the risk is not pooled
- Participants declare their volumes into the ex-ante markets, hence taking decisions with financial implications.
- In this example it is assumed that the percentage deviation between the forecast and metered output of each unit is equal.

Worked Example of Individual Model

At the DAM

- AOLR forecast for that period expects 100MWh output (38% of capacity)
- WF1 instructs bid of 42MWh (38% of capacity)
- WF2 instructs bid of 40MWh (40% of capacity)
- WF3 instructs bid of 70MW (100% of capacity)
- DAM price clears at €60/MWh

At the IDM

- AOLR forecast expects 120MWh output
- WF1 instructs AOLR to trade 6MWh
- 3 trades of equal volume (2MWh) at €70/MWh, €60/MWh and €55/MWh

At the BM

- Physical Notification is 158MWh
- Metered output is 110MWh.
- 48MWh is purchased in the BM.

Worked Example of Individual Model

Total Revenues are:

Individual Based Approach					
		WF1	WF2	WF3	Market Price
Quantity (MWh) in each Market	DAM	42	40	70	€ 60/MWh
	IDM	2.00	0.00	0.00	€ 70 /MWh
	IDM	2.00	0.00	0.00	€ 60 /MWh
	IDM	2.00	0.00	0.00	€ 55 /MWh
	BM	-1.46	-6.15	-40.38	€ 65 /MWh
Metered Output (MWh)		46.54	33.85	29.62	
Total Revenue €		€ 2,795	€ 2,000.00	€ 1,575.00	
Average Payment €/MWh		€ 60.06	€ 59.09	€ 53.18	

Passive Aggregator Model

Passive Aggregator

- Performs two or maybe three of the function
- This examples assumes only two functions are carried out
- Mechanistic function whereby an agreed formula determines quantity bid into DAM.
- In this example the quantity in DAM is the AOLR forecast
- No AOLR entity

Worked Example of Passive Model

At the DAM

- AOLR forecast for that period expects 100MWh output
- AOLR formula bids this quantity into the DAM
- DAM price clears at €60/MWh

At the IDM

- No trading in the IDM

At the BM

- Physical Notification of 100 MWh.
- Metered output is 110MWh.
- WF1, WF2, WF3 metered output is 39.31MWh, 24.77MWh & 25.92MWh
- BM clears at €65/MWh
- WF1, WF2,WF3 purchase 3MWh, 6MWh & 1MWh

Worked Example of Passive Model

Total Revenues are:

		Passive Approach			
		WF1	WF2	WF3	Market Price
Quantity (MWh) in each Market	DAM	42.31	30.77	26.92	€60 /MWh
	IDM	0.00	0.00	0.00	€70/MWh
	IDM	0.00	0.00	0.00	€60 /MWh
	IDM	0.00	0.00	0.00	€55 /MWh
	BAL	-3.00	-6.00	-1.00	€65 /MWh
Metered Output (MWh)		39.31	24.77	25.92	
Total Revenue €		€ 2,343.60	€ 1,456.20	€ 1,550.20	
Average Payment €/MWh		€ 59.62	€ 58.79	€ 59.81	

AOLR Governance

To aid the decision on this section, the consultation invites respondents to express an initial interest in aggregation services in I-SEM and potentially being the AOLR

Two Options for Framework Establishment:

- RAs put regulatory framework in place and run competition to appoint the AOLR
 - Likely to require legal change to allow CER/UR jointly procure and potentially regulate the AOLR
- Appoint the TSOs as the agent who would establish the framework and procure AOLR
 - Would potentially require an additional condition in the TSO licences

AOLR Service Provision

Two Options for Service Provision:

- Commercial aggregator acts as AOLR
 - Most economic advantageous entity is sought out that is best positioned to carry out the AOLR
 - Should promote competitive appointment
 - Should be possible to incentivise the function
- TSO carry out AOLR function in-house
 - Could be difficult to incentivise
 - Not a core TSO role
 - Conflict of interest concerns
 - Potential conflict with EU legislation

AOLR Incentives & Cost Allocation

Should an incentive be part of AOLR procurement to ensure adequate performance at market go-live?

Two Options for Incentives

- AOLR is incentivised to achieve specific market price less a commission for all volumes in portfolio (e.g. DAM or a basket of DAM and BM). Possible profit sharing for revenues obtained over set price.
- Best endeavours - by its nature the procurement process selects the most competitive AOLR thereby ensuring that optimal revenues are sought for participants

Cost Allocation

- Issue is different depending on the option
- Need to ensure no cross subsidisation (TSO in-house and passive approach)
- Need to ensure that potential for a stranded asset is minimised (TSO in house)
- Service Fee should not prove significant barrier but AOLR still needs to serve its core objective for the market

Participant Eligibility

- It is not proposed to have an upper limit on wind participation
 - There is likely to be a natural tipping point at which larger units would see greater benefits to participating independently in the ex-ante markets
- Questions posed as to whether other participant types should be included:
 - All renewable technologies?
 - All de-minimis generators?
 - Small demand?
- If other types permitted should they be grouped in settlement depending on their associated level of risk in ex-ante markets
 - i.e. should a biomass generator be exposed to the wind forecast errors?

Next Steps



- Consultation closes on 23rd January
- Is an Operations Consultation Paper needed?
 - Possibly address any operational issues in the decision
 - Largely dependent on responses...
- Final Decision Paper in August '15

Discussion

