

Single Electricity Market - Overview

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Overview

- SEM Design
- Trading & Settlement Code
 - TSC in SEM Context
 - Status of TSC
 - Participation
 - Timeline Overview
 - Data Submission
 - Pricing
- Next Steps

Single Electricity Market Design

SEM Design

- Gross Mandatory Pool - No bilateral physical trading of energy above de minimis (10 MW)
- Single System Marginal Price (SMP) for island - set ex-post
- Central Commitment
- Generators dispatched by System Operator on the basis of offers submitted to the Market Operator

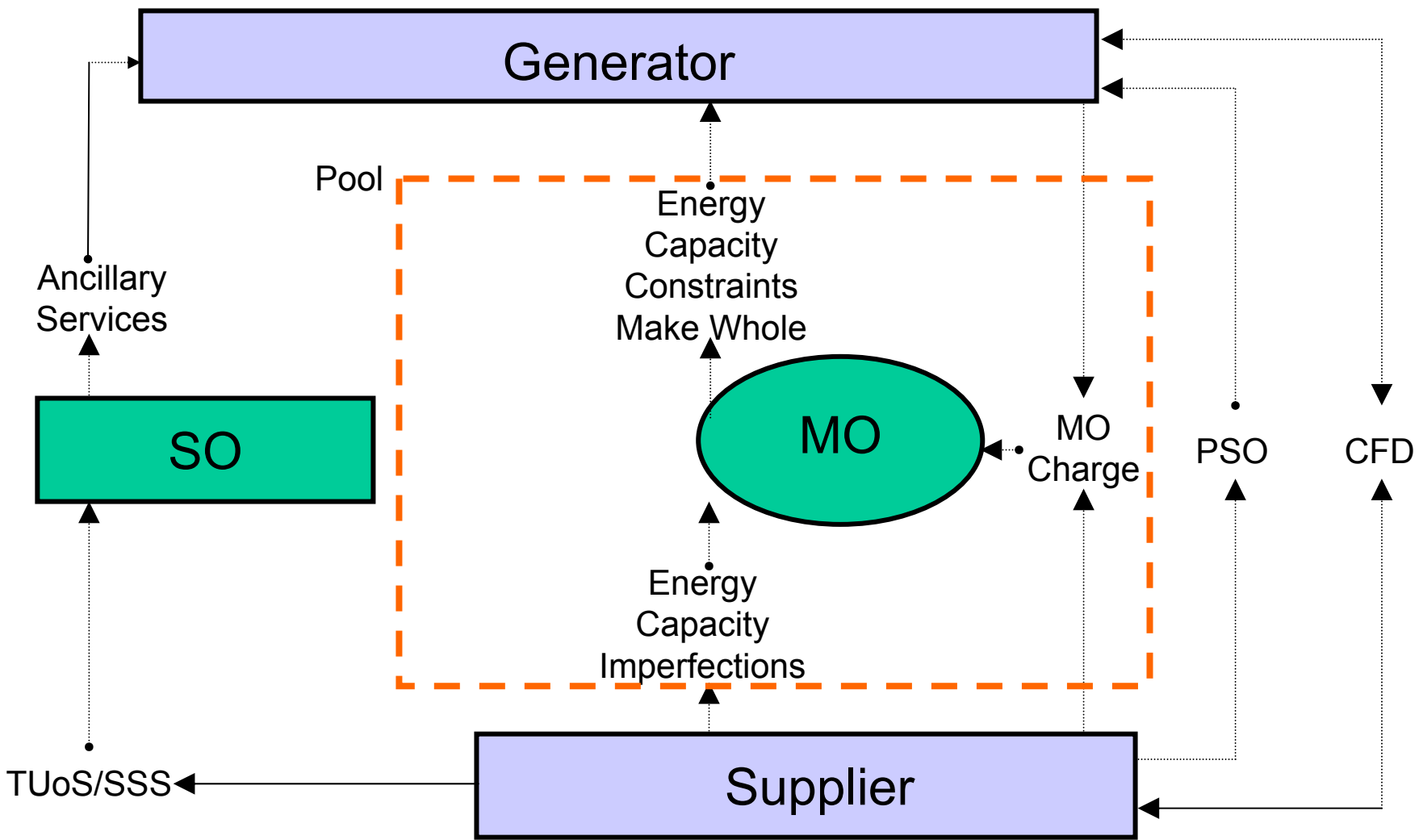
SEM Design

- Market settled on a half hourly basis
- Capacity Payments – Generators paid this based on ability to generate
- Constrained on/off payments
- Ancillary services
- Market Power Mitigation Strategy
- All-Island transmission connection policy

SEM Trading & Settlement Code

Pool Rules

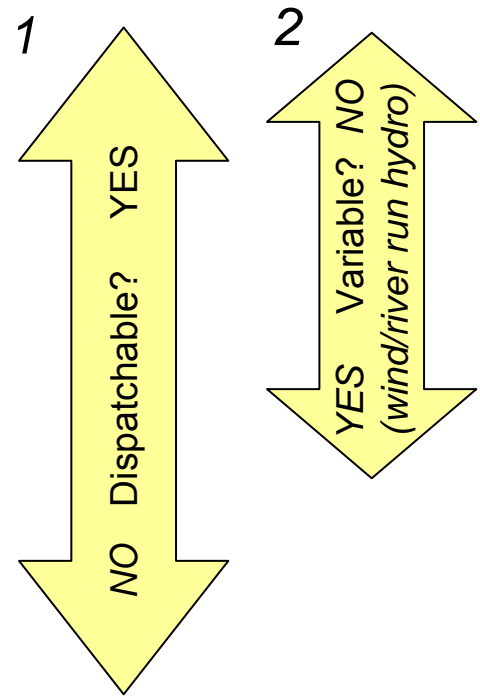
TSC in SEM Context



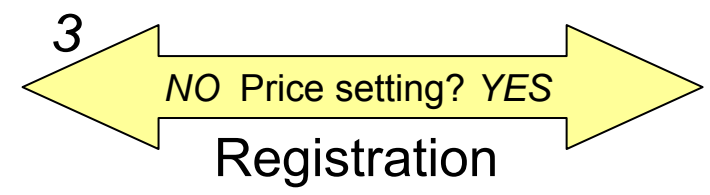
Status of TSC

- Regulatory Document
 - Generator and Suppliers required by licence to accede to and comply with TSC
- Multilateral Contract
 - Initial Participants to sign a Framework Agreement
 - Subsequent Participants to accede via an Accession Agreement

Participation

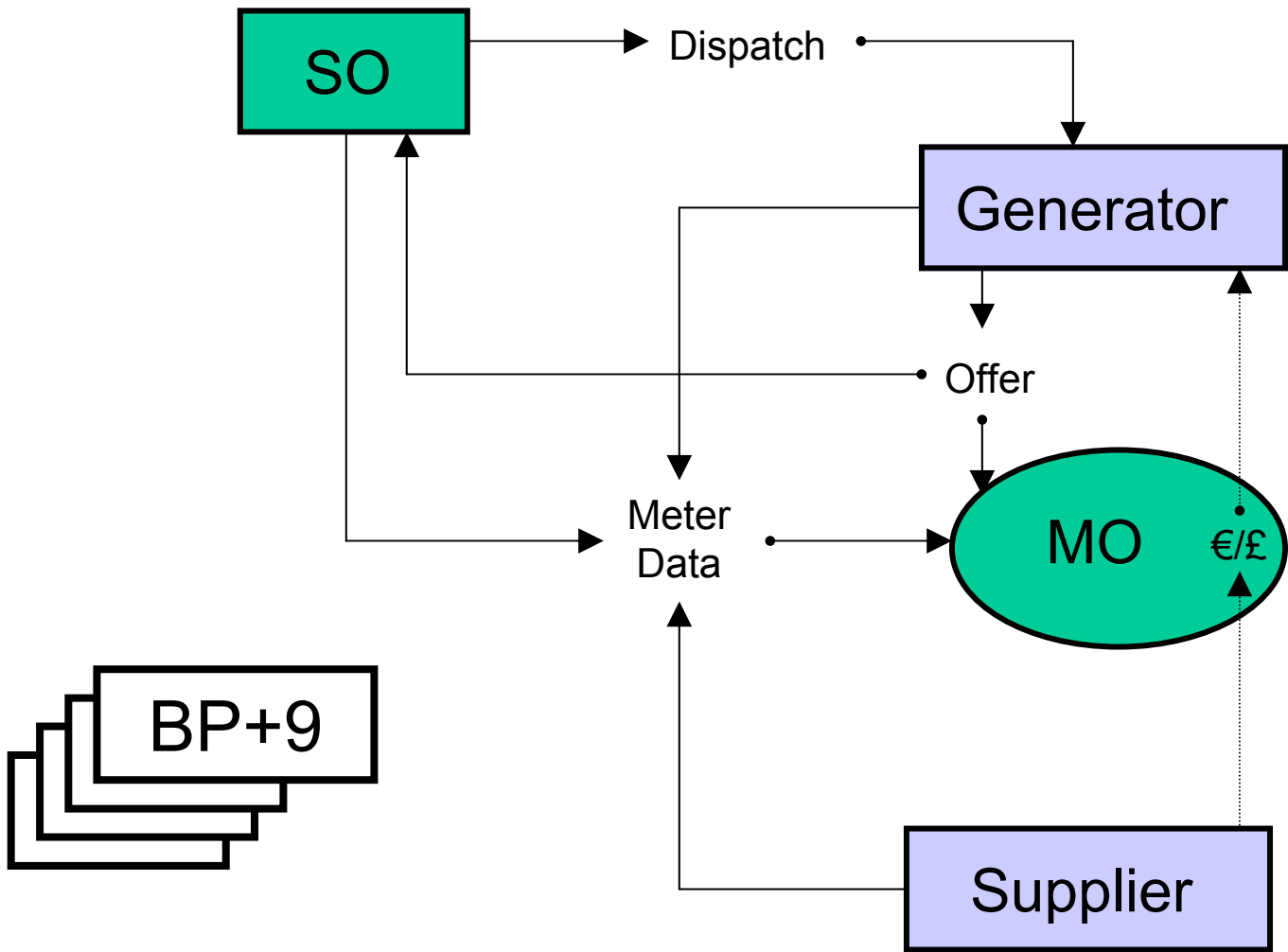


Predictable
Variable <i>Wind/river run hydro</i>
Autonomous <i>Not dispatchable</i>



Price Maker	Price Taker
• Predictable price maker (default)	• Predictable price taker
• Variable price maker	• Variable price taker
N/A	• Autonomous

Timeline Overview



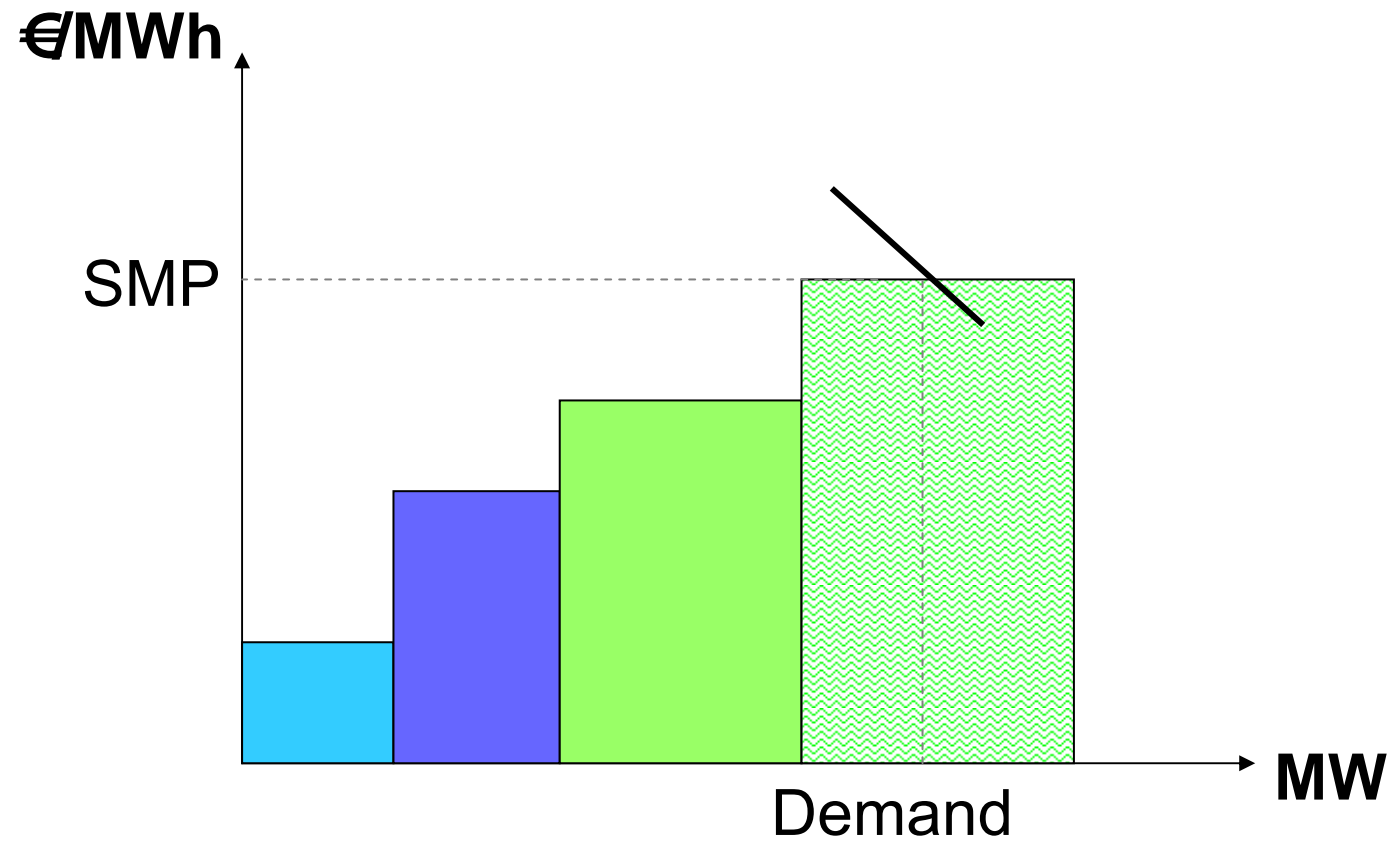
Data Submission

- Submission by Gate Closure, 10.00 D-1
- Commercial and Technical Offer Data submitted to the Market Operator
 - Price Quantity Pairs
 - Wind Units submit Nomination Profile
 - Ramp rates, dwell times, soak times, minimum stable generation, etc.
- Real time data updates to the SO
 - Availability, Minimum Output, Minimum Stable Generation

Pricing

- Generator bids in Short Run Marginal Cost (SRMC)
- Single SMP set for each half hour trading period
- SMP based on unconstrained stack of available generation
- SMP - cheapest price at which all the demand on the system can be met

System Pricing



Pricing Elements – Generators

1. Energy Payments
2. Capacity Payments
3. Constraint Payments
4. Make Whole Payments
5. Uninstructed Imbalance Payments
6. Other Charges
 - Imperfections, Market Operator Charge, Testing Charge

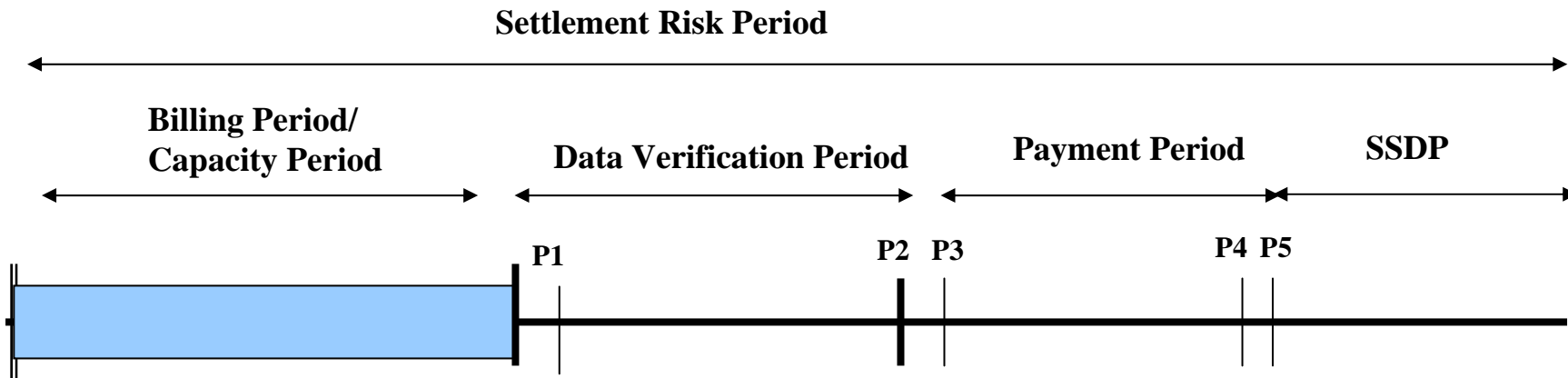
Capacity Payments

- Fixed revenue capacity mechanism – providing some financial certainty to generators
- Capacity payments to generator and capacity charges to suppliers fixed on annual basis
- Annual fixed pot broken down into shorter ‘capacity periods’
 - Divided for each year into 12 capacity periods of 1 month
- All generators eligible for capacity payments when available

Capacity Payments

- Annual Capacity Payment Sum is determined by RAs:
 - peaker cost (€/kW) times capacity (GW) required (security standard)
 - profiled into twelve monthly amounts weighted by demand forecast
- Monthly amount for generation split into three components:
 - **‘Fixed’**: allocated across TPs based on annual load forecast
 - **‘Variable’**: allocated across TPs based on ‘month-ahead’ LOLP (λ)
 - **‘Ex-Post’**: allocated across TPs based on ‘month-end’ LOLP (Φ)
- Generators paid pro-rata based on **‘Eligible Availability’** and scaled by a price factor
- Suppliers charged pro-rata based on **metered demand** and scaled by a price factor

Settlement Timelines



Settlement period	P1 – Last indicative Settlement Statement	P2 – Last verification period finished	P3 – Invoice & Initial Settlement statements sent	P4 – Invoice due	P5 – Self billing invoice due	Time to suspend (including SSDP)	Settlement Risk Period
Billing Period (Weekly)	BP+1WD at 17:00	BP+4WD at 17:00	BP+5WD at 12:00	BP+8WD at 12:00	BP+9WD at 12:00	RAs determine	RAs determine
Capacity Period (Monthly)	CP+1WD at 17:00	CP+4WD at 17:00	CP+5WD at 12:00	CP+8WD at 12:00	CP+9WD at 12:00	RAs determine	RAs determine

Financial Issues

- Security Cover
 - No Unsecured Credit – ‘fully collateralised’ market
 - Generators Pay Fixed Credit Requirement
- VAT
 - Proposed ‘self billing’ approach to VAT in the pool

Next Steps

- Transition Provisions to be completed in May 2007
- Version 2.0 of Code on 30 May 2007
- Go Active 3 July 2007
- Go Live 1 November 2007

Questions?