



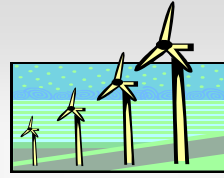
Entering the Single Electricity Market

Liam Ryan



Agenda

- SEM at a Glance
- Entering the SEM
- Your obligations
- SEM Trends



£/€ per MWh

Single Electricity Market



Pricing

Settlement

Payments

Credit Risk

MWh





Participants in the SEM

- ❑ **Registered Capacity in the Market: 9899 MW**
 - Thermal plant 8191 MM
 - Wind 1186MW
 - Pumped Storage 292 MW
 - Hydro 216 MW
 - Biomass 14 MW

- **50 Participants have registered in SEM**
 - 8 new Participants have joined the SEM in 2009

- ❑ **42 Participants have registered Generator Units**

Financial Summary

	November 07 to September 08 11 mths EUR m	October 08 to September 09 12 mths EUR m
Energy Payments	€ 2,626	€1,962
Constraints	€116	€108
Capacity	€442	€596
	€3,183	€2,666



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Who needs to register?

- Suppliers (mandatory)
- Generators $\geq 10\text{MW}$ (mandatory)
 - » Below 10MW optional

- ❑ Separate applications for Party and Units
 - » (can be completed concurrently)

- ❑ Register as a Party to the Code
 - Pre-requisites
 - » Accession Deeds x2
 - » Completed Application Form
 - » Accession Fee (€1,354.73)

- ❑ Registration of Units
 - Pre-requisites next slides



Registration of Unit Pre-requisites

– Pre-requisites when registering units in the SEM

- » Party to the Code (SEMO) (can complete concurrently)
- » Registration Fees Paid
- » Completed Participation Notice
- » Participation Fee (€3,402)
- » Unit Registration Data
- » Proof of compliance with metering requirements
- » Evidence of SO agreements (valid licences etc)
- » Forecast of Supply for Credit Cover
- » Bank Account Details
- » Form of Authority (if intermediary)

– Pre-requisites before commencing in the SEM

- » Meter Validation (Meter Data Provider)
- » Computer Interface to market test passed
- » Credit Cover in place (€10k for generators, Supplier with 1 MW demand ~ €20K)



SEM Registration Setups

- Class
 - Variable Price Taker – VPT – Controllable
 - Autonomous Generator – APT – not controllable

- Method
 - Intermediary
 - Generator Only
 - Generator with Associated Supplier
 - Generator and Independent Supplier

Registration Practicalities

- ❑ Process starts once fully completed application, with evidence of all pre-requisites, has been provided
- ❑ Can take up to 60 working days from date of receipt of complete application
- ❑ Communication Channel Qualification Testing must be completed
- ❑ Credit Cover must be in place a minimum of 5 work days before commencement date
- ❑ Commencement Notice issued only once registration requirements complete
- ! Any energy generated prior to a units commencement date cannot be settled in the market as per the Trading & Settlement Code

www.sem-o.com



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Market Registration

All Parties intending to trade, buy or sell energy in the market must complete the Participant registration process.

The registration processes consist of two major steps:

Step 1: Party registration (for accession to the market): registration as a Party to the Code

Step 2: Unit registration (for participation in the market): a Party becomes a Participant by registering Unit(s)

[Parties Acceded to the Code at 29.10.2009](#)

[Registered Participants as at 21.10.2009](#)

STEP 1: Party Registration

Inside SEMO

- [Log in to SEMO](#)
- [General Publications](#)
- [Market Publications](#)



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Trading and Settlement Code ('the Code')

» www.sem-o.com >> [Market Rules](#)



Data Submission

Especially if VPT for submission of availabilities and forecasts



Invoices and Payments

Invoices weekly & monthly (up to 28 per month)

Payment terms 3 days, strict default procedures



Credit Cover

Must have in place 20k+ per supplier, 10k+ per generator

Letter of Credit from Bank, or cash in trust account

- Computer Communications – Market Participant Interface (MPI)
 - Submitting Data if Variable Price Taker
 - Receiving Settlement statements
 - Paying Invoices

- Testing done in advance of effective date

- Training provided if required

- Digital cert



Invoices and Payments

- ❑ Settlement Statements for each day

- ❑ Invoices Types
 - Energy (Weekly)
 - Capacity (Monthly)
 - Variable/Fixed Market Operator Charges (Monthly/Weekly)

- ❑ Resettlement at M+4 and M+13

Charge and Payment Types

Supplier Charges	Generator Payments (& Charges)
<p>Energy Charges All Supplier units based on Metered Demand and System Marginal Price</p>	<p>Energy Payments To all Generator units based on Market Scheduled Quantity (MSQ) and System Marginal Price (SMP)</p>
<p>Imperfections Charge To recover constraint costs, MWP and Uninstructed imbalance payment</p>	<p>Constraint Payments Apply if Dispatch Quantity (DQ) does not equal MSQ</p>
	<p>Uninstructed Imbalance Payments If Actual Output (meter data) differs from DQ</p>
	<p>Make Whole Payments Ensures that all Generator Unit Operating Costs are met</p>
<p>Capacity Charge Charge for recovery of payment</p>	<p>Capacity Payments A payment in relation to MW availability</p>
<p>Market Operator Operating Cost Charge Fixed and Variable Charges per Unit</p>	<p>Market Operator Operating Cost Charge Fixed Charge per Units</p>
<p>Currency Costs The cost of transacting across more than one jurisdiction</p>	

Payment Timelines Capacity & Energy



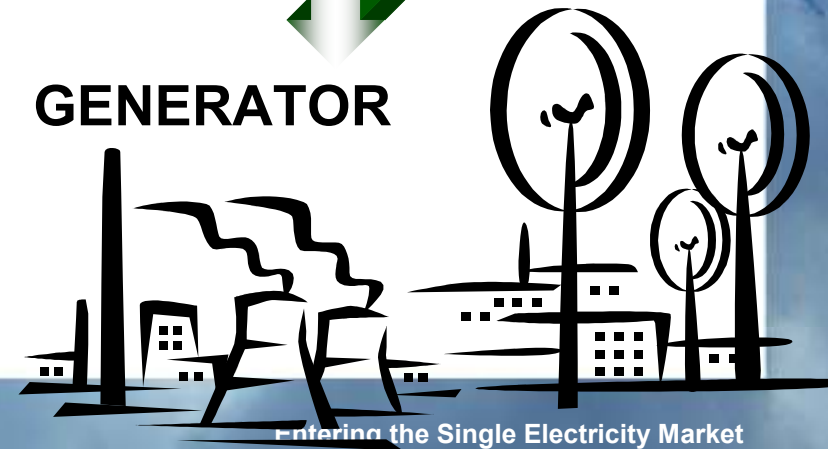
**SEM
CLEARING
ACCOUNT**

**Self Billing
Invoice
Received**



**Invoice Date + 4
Working Days**

GENERATOR



Entering the Single Electricity Market

**Invoice Date + 3
Working Days**

SUPPLIER



**Invoice
Received**



❑ Considerations when making Payments

- Tight Timelines – 3 day payment terms
- Onus on Participant to meet payment
- Obligation to pay and then dispute, not withhold payment
- Up to 28 invoices per month
- Referencing important to ensure reconciliation
- Same day transfers recommended
- Make sure have 'Invoicing and Banking Contact' on MPI

❑ Typical Timelines

- Friday 12pm Invoice, Wed 12pm Charges Due, Thurs 5pm Payments out
- See Settlement Calendar for specific timings + updates via Market Message

❑ Consequences of Default

- Default Notice
- Credit Call straightaway



- **Why have Credit Cover?**

- Reduces financial risk to SEM due to Participants defaulting on payment
- In the event of a payment default, this credit cover can be used to satisfy outstanding financial obligations to the market

- **Required Credit Cover**

- Calculated and revised daily
- Suppliers – Approx 4 weeks Charges
- Generators – Fixed Credit Cover (to cover resettlement)



- **How to Provide Credit Cover**

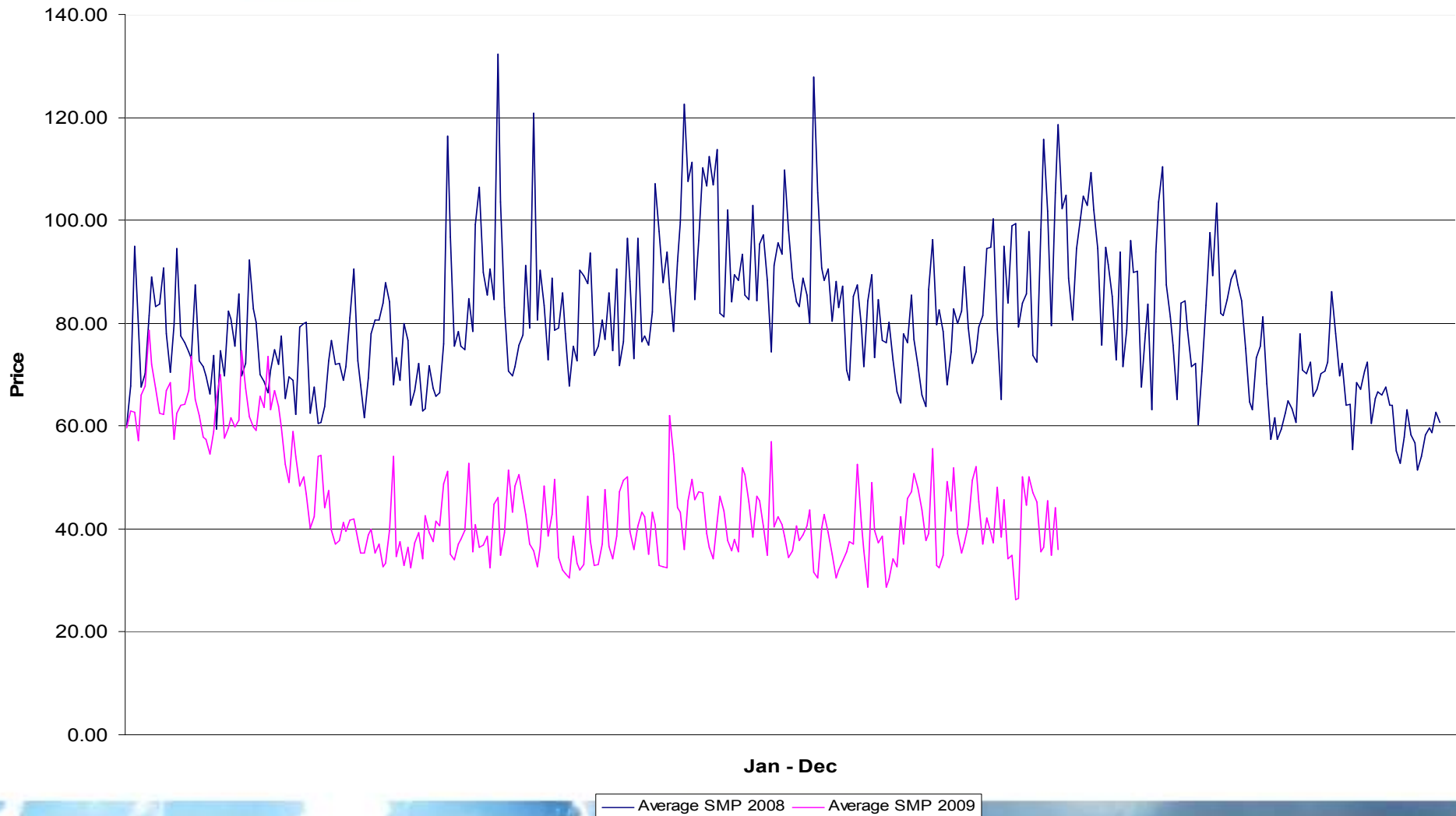
- Letter of Credit, Cash Collateral Reserve, Settlement Reallocations



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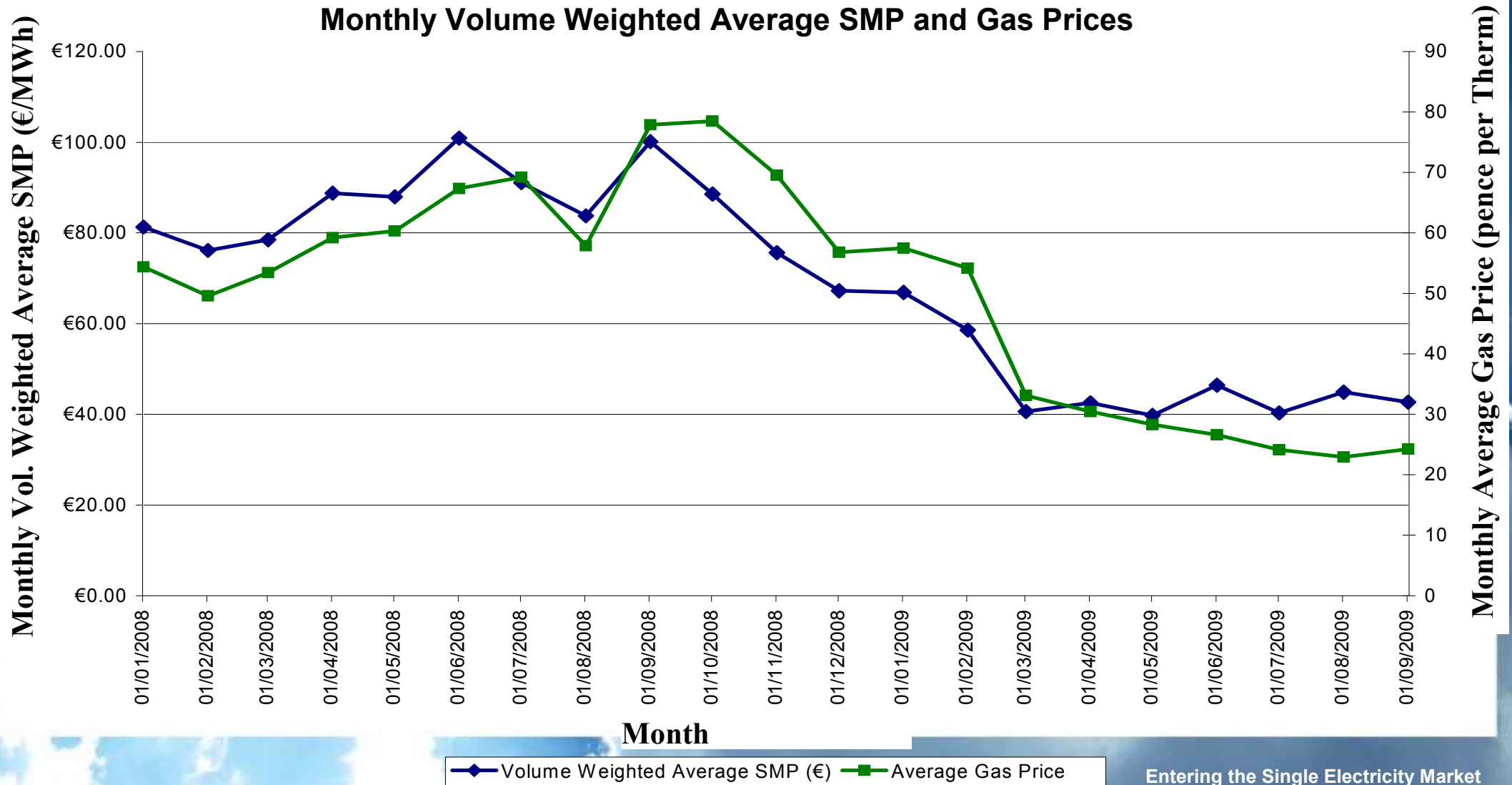
Avg. Daily SMP 2008 v 2009



Main impacts on Price

- Demand
- Fuel Price
- Wind Penetration
- Interconnection

Monthly Volume Weighted Average SMP and Gas Prices



Average SMP and Capacity Payments for Wind

	2008	2009*
Energy (€/MWh)	74.57	42.98
Capacity (€ per MW per hour)	8.41	8.06

* Only Jan to June data



Contact Information

For further details on entering the SEM see:

'Market Registration' section of

www.sem-o.com

Market Helpdesk

markethelpdesk@sem-o.com

Phone ROI: 1800 778 111

NI: 0800 0778 111

<u>Charge</u>	<u>Charge Frequency</u>	<u>2007/2008</u>	<u>2008/2009</u>	<u>2009/2010</u>
Variable Market Operator Price (VMOPy)	per MWh	€0.63	€0.60	€0.57
Fixed Market Operator Charge to Generator Units	per MW of installed capacity	€116	€125	€88
Fixed Market Operator Charge to Supplier Units	per supplier Unit	€543	€485	€367
Imperfections Price (IMPy)	per MWh	€3.21	€3.32	€2.75