

**IMO Market Evolution Program
Day Ahead Market Project**

Day Ahead Market First Settlement Process

**Presentation to the Commercial Reconciliation Sub-
Committee**

Monday, July 12, 2004

Today's Meeting - Objectives

PART 1: Provide an introduction to the DAM Project

- Review Progress to date
- Current Scheduling Objectives
- Overview of major Day Ahead Market Features

PART 2: A survey of the issues related to Commercial Reconciliation

PART 3: Detailed Design Topic

- Timing and outputs from the “DAM first settlement” process
- Invite your feedback

Settlement Timelines for the DAM

Agenda:

- 1) **Terminology Review**
- 2) **Review of the Strawman Proposal:** Calculations belonging to the *first settlement* process.
- 3) **Design Proposal:** Timing of the *first settlement* process
- 4) **Development of a future design proposal:** Market-facing deliverables from the *first settlement* process.

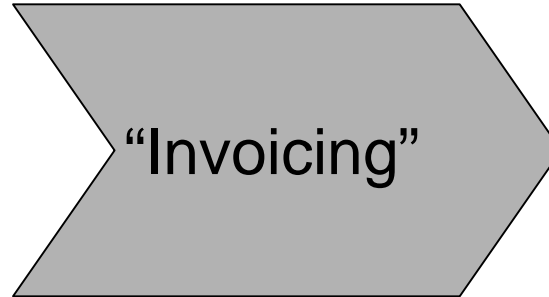
Terminology Review

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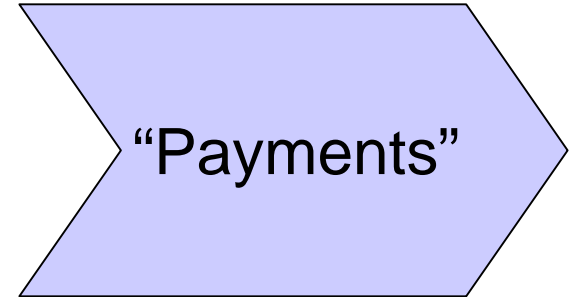
- The IMO makes a clear distinction between three different activities - each serving a specific need of the market:



- Present detailed break-down of all calculations
- Confirm all settlement data used
- Allow market participants to raise disagreements and address them
- Apply adjustments



- Formal presentation of overall amounts owing to and from the market participants for the billing period



- Effect the transfer of funds between market participant and the IMO

Terminology Review: The Two-Settlement Process

- Like many Day Ahead Markets around the region, DAM settlement activities are divided into 2 major sub-processes as follows:
 - **First Settlement:** First stage of settlement activities reflecting the DAM positions of individual market participants (the focus of today's discussion)
 - **Second Settlement:** Second stage of settlement activities involving integration with events in the *real-time* market settlement cycle
- Settlement amounts for individual market participants related to energy and operating reserve will make use of both stages of the settlement process
- Allocation of common costs through uplift amounts will take place in the second settlement process only.

Strawman Proposal:

Calculations belonging to the *first settlement* process

Strawman Proposal - Calculations Included

- Under the *DAM Strawman* proposal the following DAM settlement amounts are described as belonging to the *first settlement* process
 - Hourly Physical Transaction Settlement Amount (HPTSA{1})
 - Hourly Operating Reserve Settlement Amount (HORSA{1})
 - Hourly Virtual Transaction Settlement Amount (HVTSA)
 - DAM Congestion Management Settlement Credits (D_CMSC{1})
- In addition, it is proposed that Production Cost Guarantees also be included in the *first settlement* process
 - DAM Production Cost Guarantees (PCG{1})

Strawman Proposal - Calculations Included

- two of the *first settlement* amounts are subsequently incorporated into *second settlement* amounts....

- 1) The *first settlement* amount for the Hourly Physical Transaction Settlement Amount (HPTSA{1}) is incorporated into the corresponding *second settlement* amount:

Hourly Physical Transaction Settlement Amount (HPTSA{2})

- 2) The *first settlement* amount for the Hourly Operating Reserve Settlement Amount (HORSA{1}) is incorporated into the corresponding *second settlement* amount:

Hourly Operating Reserve Settlement Amount (HORSA{2})

Strawman Proposal - Calculations Included

- the other *first settlement* amounts are NOT incorporated into *second settlement* amounts, but are still required in the *second settlement* process:
 - Hourly Virtual Transaction Settlement Amount (HVTSA)
 - DAM Congestion Management Settlement Credits (D_CMSC{1})
 - DAM Production Cost Guarantees (PCG{1})
- “Why?:”
 - To maintain the financial neutrality of the *second settlement* process
 - To allow the market participant to make use of the existing *Notice of Disagreement* Process.

Design Proposal:

Timing of the *first settlement* process

Timing of the *first settlement* process

The proposal for the timing of the *first settlement* process is grounded in the following considerations:

- Timing and availability of pre-requisite data
- Calculation requirements for the *first settlement* process as set-out in the *DAM Strawman*
- Quality of deliverables from the *first settlement* process
- **Before reviewing the proposal for the timing of the *first settlement* process, it is worthwhile to review the structure and timing of today's real-time market (RTM) settlement process (i.e. the foundation of the *second settlement* process)...**

Key pre-requisites of the **SECOND** settlement process:

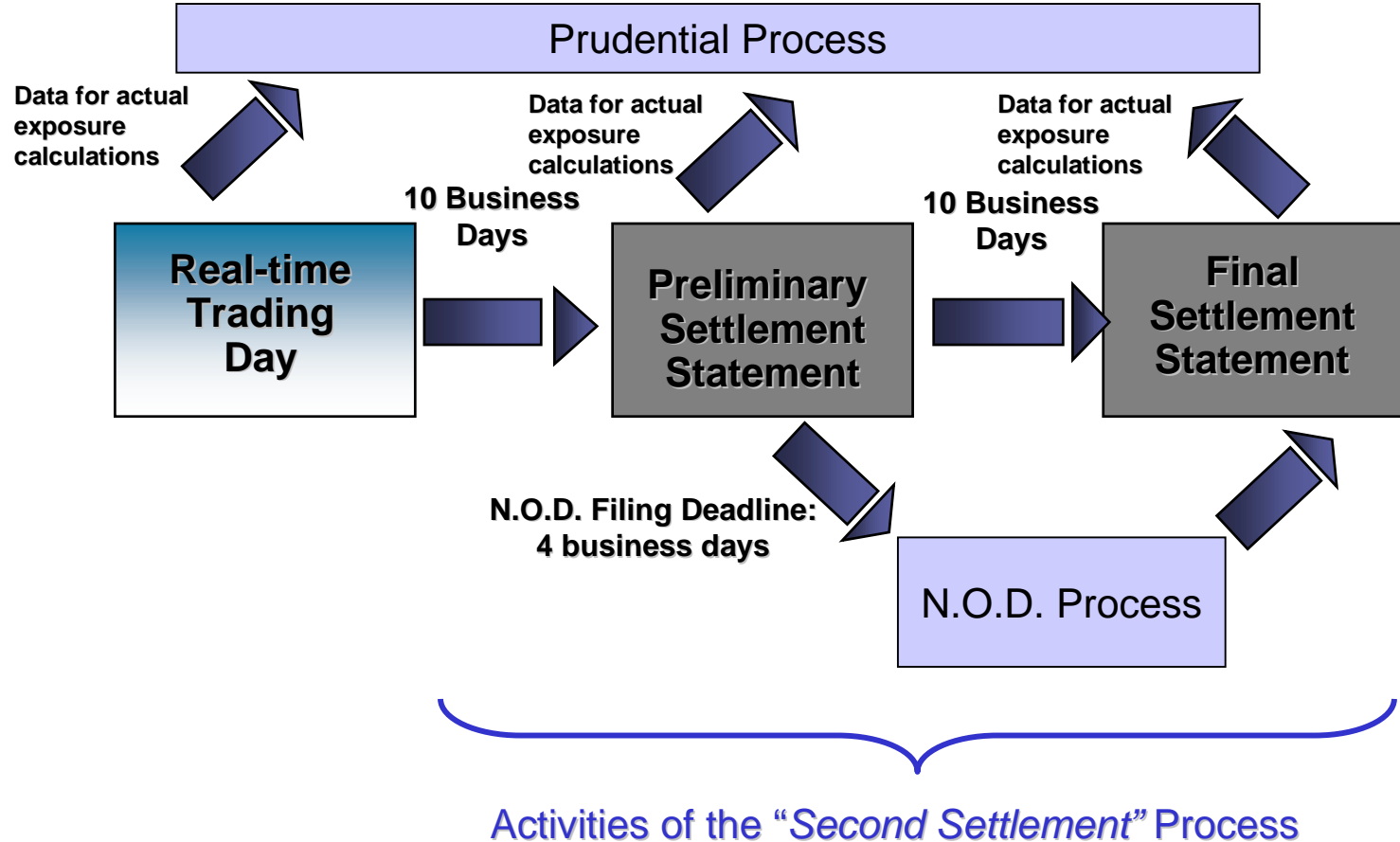
Pre-requisites for today's real-time market *second settlement* process:

- The following data must be available to the settlement process in advance of the production of preliminary settlement statements:
 - Revenue metering data and Physical Allocation Data
 - Real-time market prices and schedules
 - RTM bid/offer data
 - RTM Physical Bilateral Contract data

Additional, DAM-related pre-requisites for the *second settlement* process:

- **Results from the DAM first settlement process**
- DAM prices, schedules and forecast data
- Market Integration data
- DAM bid/offer data
- DAM Physical Bilateral Contract data

Review - timing of key market-facing events in the settlement process today:



Summary:

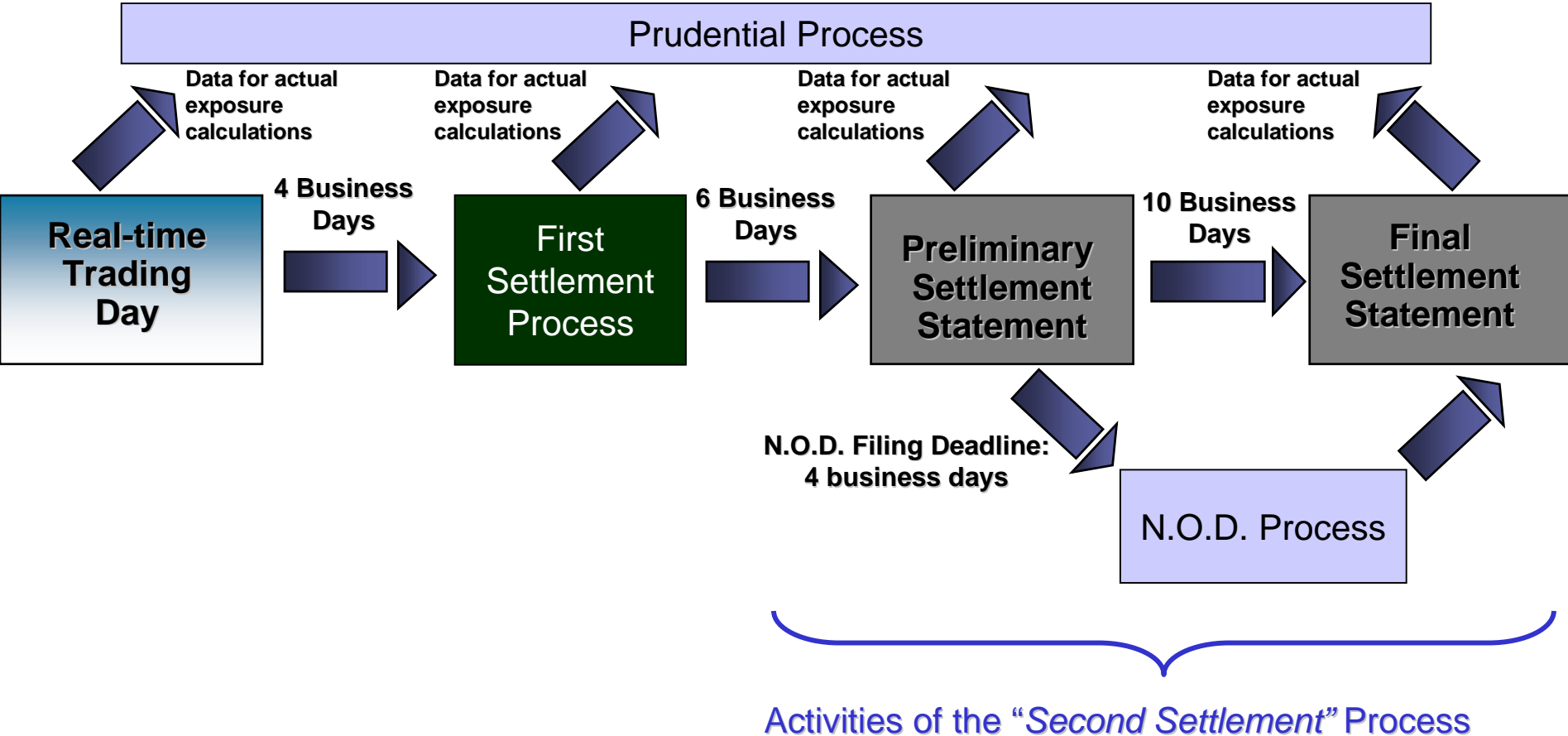
Today's settlement process largely determines the form and structure of the DAM **second** settlement process

Key pre-requisites of the FIRST settlement process:

Pre-requisites for the *first settlement process*:

- DAM prices, and schedules (known to market participants after the close of the DAM each day)
- DAM bid/offer data (known to market participants prior to the DAM each day)
- DAM Physical Bilateral Contract data (known to the selling market participant and should be known by the buying market participant prior to the closure of the DAM PBC submission window)
- Real-time market prices after the application of all Administrative Pricing decision rules (known to market participants by the end of the second business day after the RTM Trading day)
- **All items feeding into the *first settlement process* will already be known to the market participant prior to the *first settlement process* itself.**

Proposed timing of the FIRST Settlement Process:



- The timing of the *first settlement* process 4 business days after the real-time trading day reflects a balancing of all of the design considerations mentioned earlier - including IMO quality checks of the results.

Development of a future design proposal:

Market-facing deliverables from the *first settlement* process.

Proposed timing of the FIRST Settlement Process:

Review: Structural features of the *first settlement* process...

- The IMO's initial calculation of *first settlement* amounts
 - Takes place between the closure of the DAM and the *second settlement* process
 - Information redundancy: All *first settlement* amounts will either be repeated/refined in the *second settlement* process or otherwise integrated into *second settlement* amounts
 - Results from first settlement process are therefore not directly passed to invoicing (i.e. they go through second settlement first)
 - Leverages the existing Notice of Disagreement process in the *second settlement* process in a manner that ensures all data used in the *first settlement* process can be scrutinized
- Which leads to the question...**

“What is expected from the first settlement process?”

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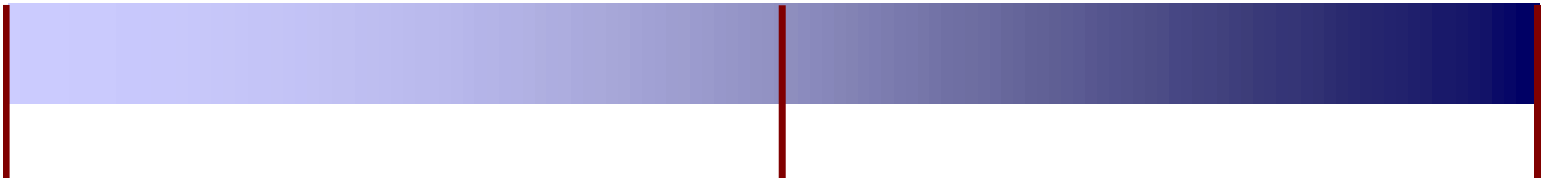
- To understand this question, it is helpful to review the market-facing deliverables from the current settlement process in the real-time market:
 - Detailed calculation of all settlement amounts for each applicable location to the minimum time resolution required (5-minute, hourly, monthly, etc)
 - Provision of ALL input data used by the settlement process (prices, quantities, measurement data, PBC data, etc.)
- This data is used for three main purposes as follows:
 - 1) Reconciliation
 - 2) Raising a Notice of Disagreement
 - 3) Monitoring exposure to the IMO-administered market

“What is expected from the first settlement process?”

- In the context of the DAM *first settlement* process, these three needs are somewhat diminished:
 - 1) Reconciliation:** The value of reconciling settlement amounts at the *first settlement* stage is somewhat questionable given that:
 - the *first settlement* process will be information purposes only
 - all *first settlement* amounts will either be repeated in the second settlement process or incorporated into second settlement amounts.
 - 2) Raising a Notice of Disagreement:** As per the design proposal, there will not be a Notice of Disagreement process in the *first settlement* process. This avoids the need for both the IMO and market participant to support two parallel processes which can be consolidated under the existing N.O.D. process (in *second settlement*).
 - 3) Monitoring exposure to the IMO-administered market:** The provision of DAM prices, quantities and real-time prices through private and public reports will already give market participants all necessary information to calculate this value in advance of the *first settlement* process

“What is expected from the first settlement process?”

There is a spectrum of possibilities regarding the level of settlements data from the first settlement process that could be provided to market participants.....



Solution: don't provide any information at all

Viewpoint: first settlement information is largely redundant and of little value

Solution: provide summary of settlement calculations only

Viewpoint: first settlement information is largely redundant but has some small information value

Solution: provide all available information on a level equal to the second settlement process

Viewpoint: first settlement information is somewhat redundant but still has at least as much value as the second settlement process

Thank You