



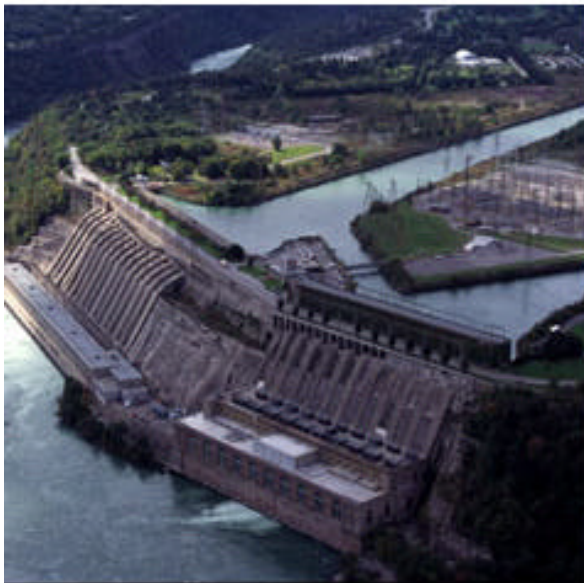
Independent Electricity Market Operator

IMO Day Ahead Market Project

DAM Settlements

Commercial Reconciliation Sub-Committee

Friday, November 19, 2004



Agenda:

- 1) DAM – General project Status Update**
- 2) DAM – Discussion of Possible Future Agenda Items**
- 3) DAM - Detailed Discussion - Charge Types**

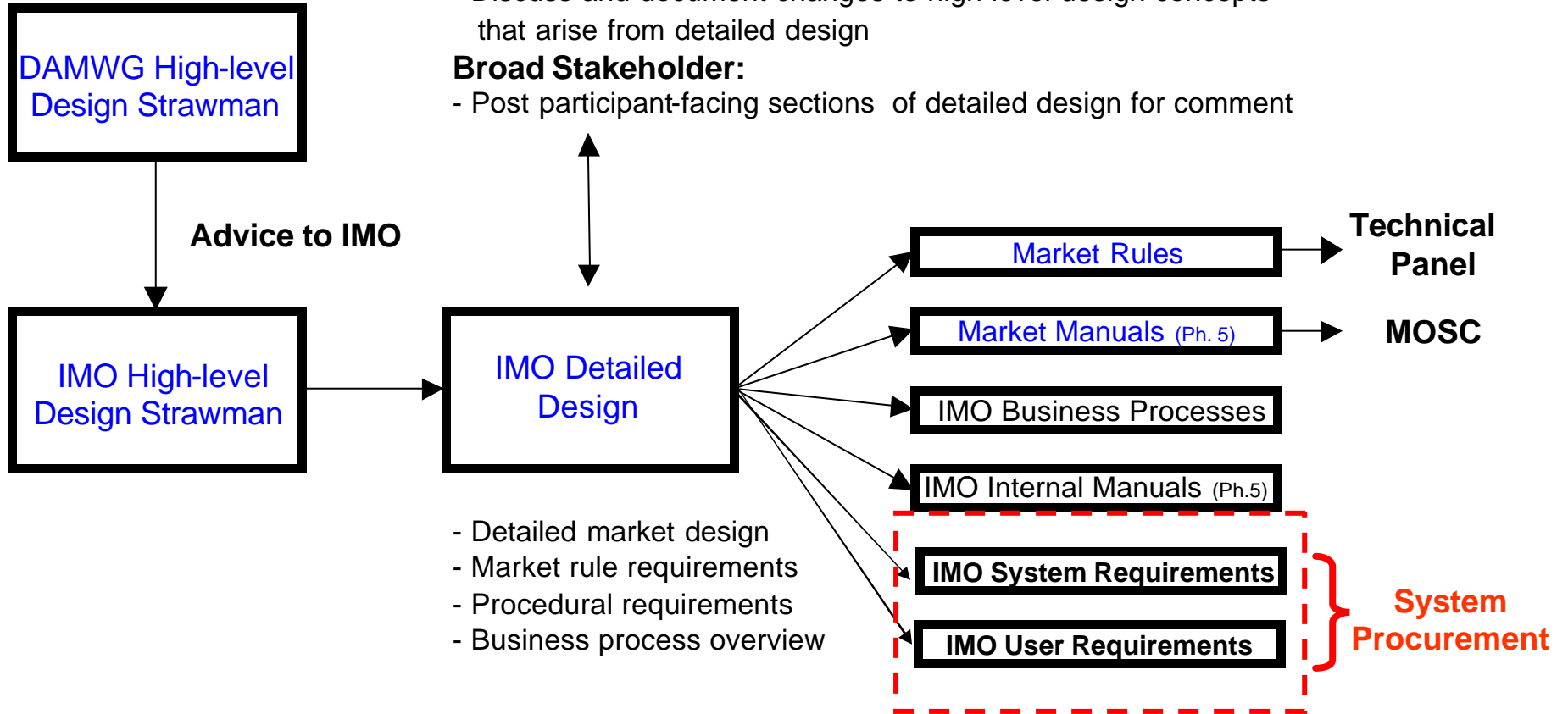
The information contained herein is based on the current Day-Ahead Market (DAM) design and is therefore subject to change without notice. The final DAM design may vary materially from the current DAM design therefore no reader should act or refrain from acting on the basis of this information. This information is provided "as is" without any warranties of any kind and the Independent Electricity Market Operator (IMO) makes no representation and disclaims all express and implied warranties and conditions of any kind, including without limitation, representations, warranties or conditions regarding accuracy, timeliness, completeness, non-infringement, merchantability or fitness for any particular purpose and the IMO assumes no responsibility to you or any third party for the consequences of any errors or omissions. The IMO is not liable to the reader for any revisions to this information or to any third party for any damages of any kind arising out of or relating to the use of this information including, but not limited to, any loss of actual or anticipated profits or revenues, business interruption losses, loss of contract, cost of capital, lost business opportunities, delay, loss of goodwill, loss of data, special, incidental, direct, indirect, consequential or punitive damages, even if the IMO is advised of such possibility. These are conditions of access to this information which you agree to by receiving the document containing this information. If you do not agree to these conditions, you are to return the document to us unread and without any manner of duplication.

DAMWG Stakeholder:

- Discuss and document changes to high level design concepts that arise from detailed design

Broad Stakeholder:

- Post participant-facing sections of detailed design for comment



- Detailed market design
- Market rule requirements
- Procedural requirements
- Business process overview

1) DAM Detailed Design Documents

Issue 1.0 Posted to IMO Web Site on August 23 and September 16

First Set - Closed September 27 - Stakeholder Comments Received

Responses discussed with DAMWG - October 14

Posted to DAM Website as Supporting Material

Second Set - Closed October 12 - Stakeholder Comments Received

Third Set Issue 2.0 Closed October 29 - Stakeholder Comments Received

Detailed Design Issue 3.0

2) Special IMO Board Meeting - November 12

DAM Update and introduction to DAM Market Rules

3) Technical Panel Votes on DAM Market Rules November 16 & 30

4) Regular IMO Board Meeting - December 10th

Technical Panel DAM Rules Development Schedule

MR # and Title	Panel Review of Amendment Submission	Panel Review of Amendment Proposal			Posting of Amendment Proposal for Stakeholders Review and Comment	Panel Vote
00272 – Market Participant Authorization	Aug. 24	Sep. 7			Oct. 6-27	Nov. 30 – Dec. 1
00266 – Facility Registration	Aug. 24	Sep. 7	Oct. 5		Oct. 6-27	Nov. 16-17
00270 – Settlements	Sep. 7	Oct. 5	Oct. 19-20		Oct. 21-Nov. 11	Nov. 30 – Dec. 1
00274 – Prudential Security	Sep. 21	Oct. 19-20			Oct. 21-Nov. 11	Nov. 30 – Dec. 1
00267 – Offers, Bids, Data Input	Oct. 5	Oct. 19-20			Oct. 21-Nov. 11	Nov. 16-17
00276 – DAM Financial Transmission Rights (FTRs)	Sep. 21	Oct. 5	Nov. 2-3		Nov. 4-25	Nov. 16-17
00264 – Market Operations	Aug. 24	Sep. 21	Oct. 19-20	Nov. 2-3	Nov. 4-25	Nov. 30 – Dec. 1
00265 – Calculation Engine	Sep. 21	Oct. 19-20	Nov. 2-3		Nov. 4-25	Nov. 30 – Dec. 1
00286 – DAM Definitions	N/A	Oct. 19-20	Nov. 2-3		Nov. 4-25	Nov. 30 – Dec. 1
00268 – DAM & RTM Integration	Oct. 19-20	Nov. 2-3			Nov. 4-25	Nov. 30 – Dec. 1
00271 – Market Billing & Funds Administration	Oct. 19-20	N/A			N/A	N/A
00269 – Publishing & Reporting	Nov. 2-3	N/A			N/A	N/A
00273 – Meter Registration (rule amendments not required)	Sep. 21	N/A			N/A	N/A
00275 – Market Monitoring & Surveillance (Compliance)	TBD	TBD			TBD	TBD

Offers, Bids & Data Input:

- Treatment of Nominated AGC Generation
- Wheeling

Calculation Engine:

- Treatment of Nominated AGC Generation
- Operating Reserve Constraints for ELRs
- Tie-breaking

Settlements:

- Treatment of Nominated AGC Generation
- Deletion of Inter-tie Pre-Screening
- PCG Commitment Adjustment
- PBC Hourly Uplifts Transfer

DAM / RTM Integration:

- Treatment of Nominated AGC Generation
- Inter-Tie Priority Curtailment
- Dispatch Data Translation Clarifications

DAM Marketplace Training

During 2004 and 2005, Marketplace Training is offering DAM training on three levels - Awareness, Understanding and Capability.

- **“Awareness”** level training is a half-day course designed to introduce interested parties to the high-level design elements of the DAM. The first Awareness training was delivered on August 23 and will continue to be offered throughout the remainder of 2004.
- **“Understanding”** level training will be a full-day session aimed at providing participants with a better understanding of the impact of the proposed market rules and procedures. These courses were first delivered on October 25 for Loads and October 27 for Generators, Exporters and Importers.
- **“Capability”** level training, scheduled for early 2005, will provide participants with more detailed information on how to actively participate in the DAM.

Agenda:

- 1) DAM – General project Status Update
- 2) DAM – Discussion of Possible Future Agenda Items**
- 3) DAM - Detailed Discussion - Charge Types

DAM Project - Possible, Future CR-SC Agenda Items:

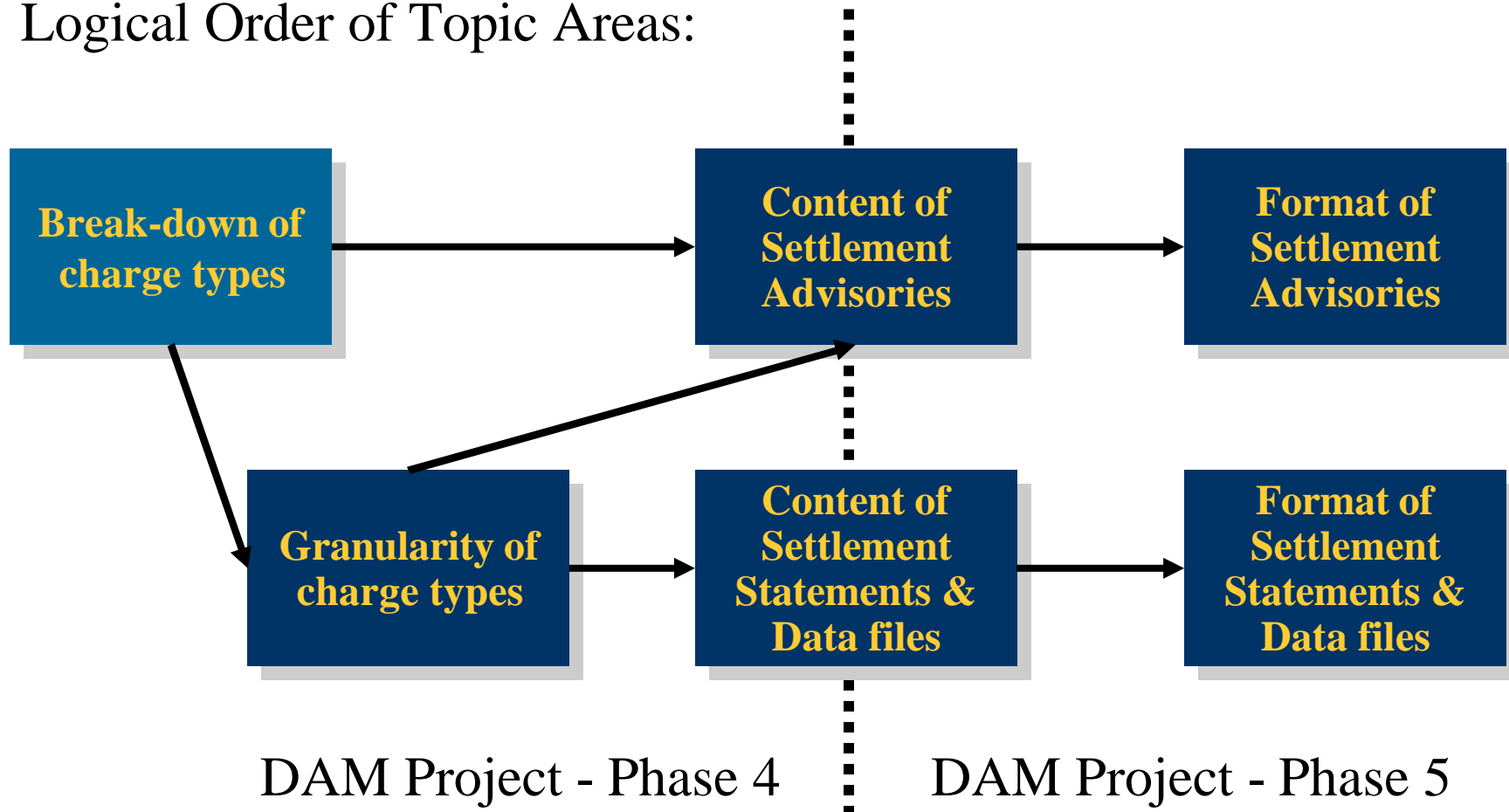
- A total of 45 questions and comments have been received with respect to the Settlements DAM Detailed Design Document so far
- 9 of these specifically raised items that could be raised at the CR-SC as future agenda items...
 - All of these questions are related to the information content/format of first settlement advisories and/or settlement statements form the second settlement process.
- Additional topics have also been identified by the DAM project that will require input at various stages over the project.

DAM Project - Possible, Future CR-SC Agenda Items:

- Break-down of settlement amounts into charge types {today's topic}
- “Granularity” (temporal and geographic resolution) of charge types
- Content of First Settlement Advisories
- Format of First Settlement Advisories
- Content of Second Settlement Statement Files and Data Files
- Format Second Settlement Statement Files and Data Files

DAM Project - Possible, Future CR-SC Agenda Items:

Logical Order of Topic Areas:



Agenda:

- 1) DAM – General project Status Update
- 2) DAM – Discussion of Possible Future Agenda Items
- 3) DAM - Detailed Discussion - Charge Types**

Charge Types:

PURPOSE of today's discussion:

- To begin preliminary discussions regarding how to break-down the various *settlement amounts* into *charge types*
- This will help define future discussions regarding content and format of settlement statements, and advisories
- **To solicit your feedback:**
 - **The approach in general**
 - **The charge types specifically**
 - **To consider four groupings of charge types that particularly seem to present a wider range of possible options**

Charge Types - Agenda:

- Background: The difference between "*settlement amounts*" and "*charge types*"
- Review of current practices in the real-time market
- Going-forward policy options regarding charge types
- Inventory of new and changing settlement amounts proposed in the DAM detailed design document.
- preliminary IMO proposal for translating these *settlement amounts* into *charge types*

Background - Official Market Rule Definitions:

settlement amount means any amount of money to be paid by or to a *market participant*, determined in accordance with Chapter 9

charge type means the identifier designating an item on an *invoice* or a *settlement statement*

The IMO Market Rules do NOT....

- describe how a *settlement amount* should be translated into a *charge type*
- describe the “item” on a settlement statement or invoice that a *charge type* identifies

current practices in the real-time market:

- Approximately 80 charge types in use today to support both the real-time market and the FTR market
- charge types broken-down along the lines of:
 - **settlement equations** -with some exceptions (e.g. CMSC for energy, and IOG)
 - **product** (energy and each class of operating reserve)
 - **function** (e.g. credit to market participant vs. uplift recovery)
- GST is presented as a sub-component of each charge type
- Reconciliation data is divided between the presentation of the charge type and the supporting data file

Going-forward policy options regarding charge types

“Highest granularity”

- **Features:** different charge type for every possible variation
- **Pro:** ease of reconciliation, troubleshooting and testing
- **Con:** more charge types to track and understand
- **Con:** not quite consistent with existing practices

“Consistency with current practices”

- **Features:** break-down of charge types by function, product and to a limited extent, by equation
- **Pro:** ease of reconciliation, troubleshooting and testing
- **Pro:** Minimizes impact on existing charge types

“Fewer charge types”

- **Features:** aggregation of various settlement amounts into a smaller number of charge types
- **Con:** more difficult (impossible?) to reconcile, troubleshoot and test
- **Pro:** fewer charge types to track and understand

Inventory of new and changing **settlement amounts** proposed in the DAM detailed design document...

New Settlement Amounts:

First Settlement Process:

- DAM Hourly Physical Transaction Settlement Amount (HPTSA{1})
 - Integrated into HPTSA{2}
- DAM Hourly Operating Reserve Settlement Amount (HORSA{1})
 - Integrated into HORSA{2}
- DAM Congestion Management Settlement Credits (D_CMSC{1})
 - Same calculation repeated in second settlement process
- DAM Production Cost Guarantees (PCGs)
 - Same calculation repeated in second settlement process
- DAM Hourly Virtual Transaction Settlement Amount (HVTSA)
 - Same calculation repeated in second settlement process

New Settlement Amounts:

Second Settlement Process:

- Hourly Physical Transaction Settlement Amount (HPTSA{2})
 - Hourly Operating Reserve Settlement Amount (HORSA{2})
 - Congestion Management Settlement Credits (D_CMSC{1})**
 - Production Cost Guarantees (PCGs)**
 - PCG Commitment Adjustment
 - Hourly Virtual Transaction Settlement Amount (HVTSA) **
 - Second Settlement CMSC Balancing (D_CMSC{2})
-
- Bid Load Commitment Uplift (BLCU)
 - Forecast Load Commitment Uplift (FLCU)
 - Additional Bid Load Commitment Uplift (deferred)
 - Load Forecast Accuracy Uplift (LFAU)
 - Net DAM Balancing Allocation (NDBA)
 - Pass 2 Import Uplift (DIU)

Modified Settlement Amounts:

Second Settlement Process - replacement of hourly uplift components:

- Operating Reserve components replaced by: Operating Reserve Uplift (DORU)
- CMSC component replaced by : CMSC Uplift (DCU)
- NEMSC component replaced by : Net DAM Balancing Allocation (NDBA)

Second Settlement Process - Other Modifications (calculation changes):

- Transmission Charge Reduction Fund (TCRF)
- Transmission Rights Settlement Credit (TRSC)
- Intertie Offer Guarantee Settlement Credit (IOG)
- Hour-ahead dispatchable load offer guarantee
- Generation Cost Guarantee Payment
- Demand Response Credit
- Station Service Reimbursement Credit
- GST Credit
- GST Debit

Preliminary IMO proposal for translating these *settlement amounts* into *charge types*

First Settlement

Current Proposal:

19 new charge types

(10 of these are identical to new, second settlement charge types)

Second Settlement

Current Proposal:

Modified	12
New*	33
TBD	2
Unchanged	60

* "New" Includes charge types that would replace existing charge types

Assuming that the policy of breaking-out *charge types* should be consistent with current practices, there are some specific settlement amounts where “how” this should be done is an open question. Specifically...

- Hourly Operating Reserve Settlement Amount
- DAM Pass 2 Import Uplift
- Production Cost Guarantees
- Second Settlement CMSC Balancing (CMSC{2})

Specific Decision Required: Hourly Operating Reserve Settlement Amount

Detailed Design *Settlement Amounts*

HORSA -all reserve
classes
- all transactions except
Pass 2 Imports

HORSA -10 min. non spin
& 30 min.
Pass 2 Imports

Proposed *Charge Types*

HORSA -10 min. spin
all transactions except
Pass 2 Imports

HORSA -10 min. non spin
all transactions except
Pass 2 Imports

HORSA -30 min
all transactions except
Pass 2 Imports

HORSA -10 min. non spin
Pass 2 Imports

HORSA -30 min
Pass 2 Imports

Q: are separate charge types
required for Pass 2 Imports?

Specific Decision Required: DAM Pass 2 Import Uplift

Detailed Design *Settlement Amounts*

DIU
(Distribution of Surplus
Amounts)

DIU
(Recovery of Deficit
Amounts)

Q: are
separate
charge types
required
Surplus and
deficit
amounts?

Proposed *Charge Types*

DIU
(Distribution of Surplus
Amounts)

DIU
(Recovery of Deficit
Amounts)

Specific Decision Required: Production Cost Guarantees

Detailed Design *Settlement Amounts*

PCG
Gen. Facilities and imports
other than PASS 2 imports

PCG
PASS 2 imports

PCG
Price Responsive Load
Components

**Q: is a separate
charge type
required for Pass
2 Imports?**

Proposed *Charge Types*

PCG
Gen. Facilities and imports
other than PASS 2 imports

PCG
PASS 2 imports

PCG
Price Responsive Load
Components

Specific Decision Required: Second Settlement CMSC Balancing (CMSC{2})

Detailed Design *Settlement Amounts*:

<p>CMSC{2} DAM Constrained ON (+ve) Gen. Facilities and imports</p>	<p>CMSC{2} DAM Constrained ON (+ve) All classes of O.R.</p>	<p>CMSC{2} DAM Constrained ON (+ve) Price Responsive Load Components</p>
<p>CMSC{2} DAM Constrained ON (-ve) Gen. Facilities and imports</p>	<p>CMSC{2} DAM Constrained ON (-ve) All classes of O.R.</p>	<p>CMSC{2} DAM Constrained ON (-ve) Price Responsive Load Components</p>
<p>CMSC{2} DAM Constrained OFF (-ve) Gen. Facilities and imports</p>	<p>CMSC{2} DAM Constrained OFF (-ve) All classes of O.R.</p>	<p>CMSC{2} DAM Constrained OFF (-ve) Price Responsive Load Components</p>
<p>CMSC{2} DAM Constrained OFF (+ve) Gen. Facilities and imports</p>	<p>CMSC{2} DAM Constrained OFF (+ve) All classes of O.R.</p>	<p>CMSC{2} DAM Constrained OFF (+ve) Price Responsive Load Components</p>

Specific Decision Required: Second Settlement CMSC Balancing (CMSC{2})

Proposed *Charge Types*

CMSC{2}
 DAM Constrained ON (+ve)
 DAM Constrained ON (-ve)
 DAM Constrained OFF (-ve)
 DAM Constrained OFF (+ve)

 Gen. Facilities and imports

CMSC{2}
 DAM Constrained ON (+ve)
 DAM Constrained ON (-ve)
 DAM Constrained OFF (-ve)
 DAM Constrained OFF (+ve)

 O.R.: 10 min. spin

CMSC{2}
 DAM Constrained ON (+ve)
 DAM Constrained ON (-ve)
 DAM Constrained OFF (-ve)
 DAM Constrained OFF (+ve)

 O.R.: 10 min. non-spin

CMSC{2}
 DAM Constrained ON (+ve)
 DAM Constrained ON (-ve)
 DAM Constrained OFF (-ve)
 DAM Constrained OFF (+ve)

 O.R.: 30 min.

CMSC{2}
 DAM Constrained ON (+ve)
 DAM Constrained ON (-ve)
 DAM Constrained OFF (-ve)
 DAM Constrained OFF (+ve)

 Price Responsive Load
 Components

Q: is it helpful to reorganize the charges in a manner consistent with DAM and real-time CMSC or is it better to follow the same break-down as the Detailed Design Document? 27



Supplemental Slides

List of Stakeholder Questions regarding the DAM Detailed Design Document “Settlement” where potential CRSC agenda items could be raised:

•5.1

•5.3

•5.4

•5.10

•5.16

•5.18

•5.31

•5.35

•5.37

DAM Detailed Design Documents - Stakeholder Questions and Comments are available on the IMO public website at:

http://www.theimo.com/imoweb/consult/mep_dam.asp

THANK YOU

