ELECTRICITY INDUSTRY ACT 2004
ELECTRICITY INDUSTRY (WHOLESALE ELECTRICITY - MARKET)
REGULATIONS 2004
Wholesale Electricity Market Rules

IMO AMENDING RULES RC_2010_33 MADE ON 16 May 2011
These Amending Rules commence at 08.00am on 1 November 2011

The following clauses are amended (~~deleted wording~~, <u>new wording</u>):

3.22.2.   When System Management has entered into an Ancillary Service Contract with a Rule Participant, System Management must as soon as practicable and not less than 20 Business Days prior to the Ancillary Service Contract taking effect, provide the IMO with:

    (a)   the identity of the Rule Participant~~,~~<u>; and</u>

    (b)   <u>for each Contracted Ancillary Service</u> ~~the Ancillary Service contracted~~ to be provided by the Rule Participant <u>under the Ancillary Service Contract:</u>~~;~~

        i.   <u>a unique identifier for the Contracted Ancillary Service;</u>

        ii.   <u>the type of Ancillary Service where this can be one of:</u>

            1.   <u>Spinning Reserve Service;</u>

            2.   <u>Load Following Service;</u>

            3.   <u>Load Rejection Reserve Service;</u>

            4.   <u>System Restart Service; or</u>

            5.   <u>Dispatch Support Service; and</u>

        iii.   <u>the form of settlement data that System Management will provide to the IMO for the Contracted Ancillary Service provided by the Rule Participant, where this data must be one of the formats allowed by clause 3.22.3.</u>

    ~~(c)   a unique identifier for the Ancillary Service Contract;~~

    ~~(d)   the form of settlement data that System Management will provide to the IMO for the Contracted Ancillary Service provided by the Rule Participant, where this data must be one of the formats allowed by clause 3.22.3.~~

3.22.3.   System Management must provide the following information to the IMO for each Rule Participant holding an Ancillary Service Contract for a Trading Month by the date specified in clause 9.16.2(a):

    (a)   the identity of the Rule Participant;

    (b)   for each <u>Contracted Ancillary Service provided under an</u> Ancillary Service Contract held <u>by the Rule Participant</u>:

        i.   the type of Ancillary Service where this can be one of:

1. Spinning Reserve Service;

2. Load Following Service;

3. Load Rejection Reserve Service;

4. System Restart Service; or

5. Dispatch Support Service;

ii. for each Trading Interval of the Trading Month the quantity of Ancillary Service to a precision of 0.001 units ~~(where no specific unit of measure will be assumed).~~, where the unit of measure is:

1. MWh for Spinning Reserve Service;

2. MWh for Load Following Service;

3. MWh for Load Rejection Reserve Service;

4. as determined by System Management for System Restart Service; or

5. as determined by System Management for Dispatch Support Service; and

iii. either:

1. a total monthly payment for the Ancillary Service in dollars and whole cents; or

2. a price in dollars and whole cents per unit of the quantity described in (ii) per Trading Interval.

9.9.1. The Ancillary Service settlement amount for Market Participant p for Trading Month m is:

ASSA(p,m) = Electricity Generation Corporation AS Provider Payment(p,m)
    + ~~d(p,i) × ASP_Payment(i,m)~~ ASP_Payment(p,m)
    - Load_Following_Share(p,m)
    × (Capacity_LF(m) + Availability_Cost_LF(m))
    - Reserve_Cost_Share(p,m)
    - Consumption_Share(p,m) × Cost_LRD(m)

Where

 the Electricity Generation Corporation AS Provider Payment(p,m) =
  0 if Market Participant p is not the Electricity Generation Corporation
 and
  (Availability_Cost_R(m) + Availability_Cost_LF(m) + Cost_LRD(m))
   - ~~Sum(i∈I, ASP_Payment(i,m))~~ ASP_Balance_Payment(m)
 otherwise~~.~~;

 ~~d(p,i) is 1 if ASP i corresponds to Market Participant p and zero otherwise;~~

ASP_Payment(~~i~~p,m) is the total payment to Market Participant p for Contracted Ancillary Services in Trading Month m, determined in accordance with clause 9.9.3;

ASP_Balance_Payment(m) is the amount determined in accordance with clause 9.9.3A for Trading Month m;

Load_Following_Share(p,m) is the share of the Cost_LF(m) allocated to Market Participant p in Trading Month m, where this is to be determined by the IMO using the methodology described in clause 3.14.1;

Reserve_Cost_Share(p,m) is defined in clause 9.9.2(b);

Consumption_Share(p,m) is the proportion of consumption associated with Market Participant p for Trading Month m determined by the IMO in accordance with clause 9.3.7;

Capacity_LF(m) is the total Load Following ~~service~~ Service capacity payment cost for Trading Month m as specified by the IMO under clause 3.22.1(a);

Availability_Cost_R(m) is the total Spinning Reserve Service availability payment cost~~s~~, excluding Load Following costs, for Trading Month m, as calculated under clause 9.9.2(c);

Availability_Cost_LF(m) is the total Load Following Service availability payment cost~~s~~ for Trading Month m, as calculated under clause 9.9.2(d); and

Cost_LRD(m) is the total Load Rejection Reserve Service, System Restart Service, and Dispatch Support Service ~~services~~ payment cost~~s~~ for Trading Month m as specified by the IMO under clause 3.22.1(g).

9.9.1A.   The Ancillary Service settlement amount for Trading Month m for Rule Participant ~~k~~ i where Rule ~~Particant k~~ Participant i is not a Market Participant is ~~d(k,i) × ASP_Payment(i,m) where d(k,i) = 1 if ASP i corresponds to Rule Participant k and zero otherwise and ASP_Payment(i,m) is~~ ASP_Payment(i,m), determined in accordance with clause 9.9.3.

9.9.2.   The following terms ~~related~~ relate to Ancillary Service availability costs:

(a)   the total availability cost for Trading Month m:

Availability_Cost(m) =
    0.5 × (Margin_Peak(m) × Sum(~~d∈D,t∈Peak,MCAP(d,t~~
    × (Capacity_R_Peak(m) –
    Sum(~~i∈I,ASP_SRQ(i,t)~~c∈CAS_SR,ASP_SRQ(c,t)))))
    + 0.5 × (Margin_Off-Peak(m) × Sum(~~d∈D,t∈Off-Peak,MCAP(d,t~~
    × (Capacity_R_Off-Peak(m) –
    Sum(~~i∈I,ASP_SRQ(i,t)~~c∈CAS_SR,ASP_SRQ(c,t)))))
    +
    Sum(~~i∈I,ASP_SRPayment(i,m)~~c∈CAS_SR,ASP_SRPayment(c,m

))

+ Sum(i∈I,ASP_LFPayment(i,m)
c∈CAS_LF,ASP_LFPayment(c,m))

(b)   the Spinning Reserve ~~Cost Share~~ cost share for Market Participant p, which is a Market Generator, for Trading Month m:

Reserve_Cost_Share(p,m) =
0.5 × (Margin_Peak(m) × Sum(d∈D,t∈Peak,MCAP(d,t)
× Reserve_Share(p,t)
× (Capacity_R_Peak(m) – Sum(i∈I,ASP_SRQ(i,t)
c∈CAS_SR,ASP_SRQ(c,t)) - 0.5 × LFR(m))))
+ 0.5 × (Margin_Off-Peak(m) × Sum(d∈D,t∈Off-Peak,MCAP(d,t)
× Reserve_Share(p,t)
× (Capacity_R_Off-Peak(m) – Sum(i∈I,ASP_SRQ(i,t)
c∈CAS_SR,ASP_SRQ(c,t)) - 0.5 × LFR(m))))
+ Sum(t∈~~Peak and Off_Peak~~T, Reserve_Share(p,t)
× Sum(i∈I,ASP_SRPayment(i,m)
c∈CAS_SR,ASP_SRPayment(c,m) / TITM))

(c)   the total Spinning Reserve ~~Availability Cost~~ availability cost for Trading Month m:

Availability_Cost_R(m) =
Sum(p∈P, Reserve_Cost_Share(p,m))

(d)   the total Load Following ~~Availability Cost~~ availability cost for Trading Month m:

Availability_Cost_LF(m) =
Availability_Cost(m) - Availability_Cost_R(m)

Where

t denotes a Trading Interval in Trading Month m;

T is the set of Trading Intervals in Trading Month m;

c denotes a Contracted Ancillary Service;

CAS_SR is the set of Contracted Spinning Reserve Services;

CAS_LF is the set of Contracted Load Following Services;

P is the set of all Market Participants;

~~ASP_SRQ(i,t)~~ ASP_SRQ(c,t) is the quantity provided by System Management in accordance with clause 3.22.3(b)(ii) for Contracted Spinning Reserve Service c ~~of Spinning Reserve provided by Ancillary Service Provider i~~ in Trading Interval t multiplied by 2, in units of MW (this being one of the quantities referred to ~~in clause 9.9.3~~);

~~ASP_SRPayment(i,m)~~ ASP_SRPayment(c,m) is defined in clause 9.9.4 ~~9.9.3~~;

ASP_LFPayment(i,m) ASP_LFPayment(c.m) is defined in clause 9.9.4 9.9.3;

TITM is the number of Trading Intervals in ~~the~~ Trading Month m (excluding any Trading Intervals prior to Energy Market Commencement);

Reserve_Share(p,t) is the share of the Spinning Reserve ~~service~~ Service payment costs allocated to Market Participant p in Trading Interval t, where this is to be determined by the IMO using the methodology described in clause 3.14.2;

Margin_Peak(m) is the reserve availability payment margin applying for Peak Trading Intervals for Trading Month m as specified by the IMO under clause 3.22.1(c);

Margin_Off-Peak(m) is the reserve availability payment margin applying for Off-Peak Trading Intervals for Trading Month m as specified by the IMO under clause 3.22.1(d);

Capacity_R_Peak(m) is the capacity necessary to cover the Ancillary Services Requirement for Spinning Reserve for Peak Trading Intervals for Trading Month m as specified by the IMO under clause 3.22.1(e);

Capacity_R_Off-Peak(m) is the capacity necessary to cover the Ancillary Services Requirement for Spinning Reserve for Off-Peak Trading Intervals for Trading Month m as specified by the IMO under clause 3.22.1(f);

LFR(m) is the capacity necessary to cover the Ancillary Services Requirement for Load Following for Trading Month m as specified by the IMO under clause 3.22.1(fA);

~~MCAP(d,t) has the meaning given in clause 9.8.1and=0 if MCAP (d,t)<0~~MCAP(t) is the greater of zero and the Marginal Cost Administered Price for Trading Interval t calculated in accordance with clause 6.14.2;

Peak ~~denotes the set of Trading Intervals occurring during Peak Trading Intervals, where "t" refers to a Trading Interval during a Trading Day;~~is the set of Peak Trading Intervals in Trading Month m; and

Off-Peak ~~denotes the set of Trading Intervals occurring during Off-Peak Trading Intervals, where "t" refers to a Trading Interval during a Trading Day; and~~is the set of Off-Peak Trading Intervals in Trading Month m.

~~D denotes the set of Trading Days within Trading Month m, where "d" is used to refer to a member of that set.~~

9.9.3.   The value of ASP_Payment(i,m) for ~~Ancillary Service Provider~~ Rule Participant i in Trading Month m is the sum of:

(a)   the sum over all ~~Ancillary Service Contracts for Spinning Reserve~~ Contracted Spinning Reserve Services c provided by Rule Participant i of ASP_SRPayment(~~i~~c,m)~~, the payment under that contract~~;

(b)   the sum over all ~~Ancillary Service Contracts for Load Following~~ Contracted Load Following Services c provided by Rule Participant i of ASP_LFPayment(~~i~~c,m)~~, the payment under that contract~~;

(c)   the sum over all ~~Ancillary Service Contracts for Load Rejection Reserve~~ Contracted Load Rejection Reserve Services c provided by Rule Participant i of ASP_LRPayment(~~i~~c,m)~~, the payment under that contract~~;

(d)   the sum over all ~~Ancillary Service Contracts for System Restart~~ Contracted System Restart Services c provided by Rule Participant i of ASP_BSPayment(~~i~~c,m)~~, the payment under that contract~~; and

(e)   the sum over all ~~Ancillary Service Contracts for Dispatch Support~~ Contracted Dispatch Support Services c provided by Rule Participant i of ASP_DSPayment(~~i~~c,m)~~, the payment under that contract~~

where each of the terms ASP_SRPayment(~~i~~c,m), ASP_LFPayment(~~i~~c,m), ASP_LRPayment(~~i~~c,m), ASP_BSPayment(~~i~~c,m) and ASP_DSPayment(~~i~~c,m) is determined in accordance with clause 9.9.4.

9.9.3A.   The value of ASP_Balance_Payment(m) for Trading Month m is:

ASP_Balance_Payment(m) =
        $\text{Sum}(c \in \text{CAS\_SR, ASP\_SRPayment}(c,m))$ +
        $\text{Sum}(c \in \text{CAS\_LF, ASP\_LFPayment}(c,m))$ +
        $\text{Min}(\text{Cost\_LR}(m), \text{Sum}(c \in \text{CAS\_LR, ASP\_LRPayment}(c,m))$
          $+ \text{Sum}(c \in \text{CAS\_BS, ASP\_BSPayment}(c,m)))$, +
        $\text{Sum}(c \in \text{CAS\_DS, ASP\_DSPayment}(c,m))$

where

        c denotes a Contracted Ancillary Service;

        CAS_SR is the set of Contracted Spinning Reserve Services;

        CAS_LF is the set of Contracted Load Following Services;

        CAS_LR is the set of Contracted Load Rejection Reserve Services;

        CAS_BS is the set of Contracted System Restart Services;

        CAS_DS is the set of Contracted Dispatch Support Services;

        Cost_LR(m) is the amount specified by the IMO for Trading Month m under clause 3.22.1(g)(i) for Load Rejection Reserve Service and System Restart Service, and Dispatch Support Services except those provided through clause 3.11.8B, and

        each of the terms ASP_SRPayment(c,m), ASP_LFPayment(c,m), ASP_LRPayment(c,m), ASP_BSPayment(c,m) and ASP_DSPayment(c,m) is determined in accordance with clause 9.9.4.

9.9.3B.   The value of Cost_LR_Shortfall(m) for Trading Month m is:

Cost_LR_Shortfall(m) =
                        Max(0, Sum(c∈CAS_LR, ASP_LRPayment(c,m))
                          + Sum(c∈CAS_BS, ASP_BSPayment(c,m))
                          - Cost_LR(m))

where

c denotes a Contracted Ancillary Service;

CAS_LR is the set of Contracted Load Rejection Reserve Services;

CAS_BS is the set of Contracted System Restart Services;

Cost_LR(m) is the amount specified by the IMO for Trading Month m under clause 3.22.1(g)(i) for Load Rejection Reserve Service and System Restart Service, and Dispatch Support Services except those provided through clause 3.11.8B, and

each of the terms ASP_LRPayment(c,m) and ASP_BSPayment(c,m) is determined in accordance with clause 9.9.4.

9.9.4.   For each ~~Ancillary Service Provider i and each Ancillary Service Contract~~ Contracted Ancillary Service c, the payment~~s~~ ASP_SRPayment(~~i~~c,m) for Spinning Reserve Service, ASP_LFPayment(~~i~~c,m) for Load Following Service, ASP_LRPayment(~~i~~c,m) for Load Rejection Reserve Service, ASP_BSPayment(~~i~~c,m) for System Restart Service ~~and~~ or ASP_DSPayment(~~i~~c,m) for Dispatch Support Service, as applicable, ~~are~~ for Trading Month m is:

(a)   the applicable monthly dollar value specified by System Management for that Trading Month in accordance with clause 3.22.3(b)(iii)(1); or~~, if no such value is specified,~~

(b)   where no value is specified under clause 9.9.4(a), the product of the applicable price specified in clause 3.22.3(b)(iii)(2) for that Trading Month and the sum over Trading Intervals in that Trading Month of the applicable quantities specified in clause 3.22.3(b)(ii).

9.10A.1.   The Non-Compliance Charge settlement amount for Market Participant p for Trading ~~Interval t of Trading Day d~~ Month m is:

If Market Participant p is the Electricity Generation Corporation

NCC(p,m)   = - Sum(d∈~~D,~~ t ∈ T, CP(~~d,~~t) x ABS[NCQ(p,~~d,~~t)])

Otherwise

NCC(p,m)   = 0

Where

T is the set of all Trading Intervals in Trading Month m, where "t" refers to a member of that set.

CP(d,t), is the non-compliance cost applicable in Trading Interval t ~~of Trading Day d~~ as specified in clause 9.10A.2;

NCQ(p,d,t) is the MWh quantity of non-compliance for Market Participant p for Trading Interval t ~~of Trading Day d~~ as specified by System Management in accordance with clause ~~7.13.1(cC);~~7.13.1A(a); and

ABS[NCQ(p,d,t)] means the mathematical absolute value of NCQ(p,d,t);.

~~D denotes the set of Trading Days within Trading Month m, where "d" is used to refer to a member of that set.~~

~~T denotes the set of all Trading Intervals in Trading Day d, where "t" is used to refer to a member of that set.~~

9.11.1. The Reconciliation Settlement amount for Market Participant p for Trading Month m is:

$$RSA(p,m) = (-1) \times Consumption\_Share(p,m) \times$$
$$(Sum(q \in P, d \in D, t \in T, BSA(q,d,t))$$
$$+ Sum(q \in P, NCC(q,m))$$
$$+ Cost\_LR\_Shortfall(m))$$

Where

Consumption_Share(p,m) is the proportion of consumption associated with Market Participant p for Trading Month m determined by the IMO in accordance with clause 9.3.7;

BSA(q,d,t) is the Balancing Settlement Amount for Market Participant q for Trading Day d and Trading Interval t;

NCC(q,m) is the Non-Compliance Charge settlement amount for Market Participant q for Trading Month m;

Cost_LR_Shortfall(m) is determined in accordance with clause 9.9.3B;

. . .

Glossary

Contracted Ancillary Service: An Ancillary Service provided by a Rule Participant under an Ancillary Service Contract.

Contracted Dispatch Support Service: A Dispatch Support Service provided by a Rule Participant under an Ancillary Service Contract.

Contracted Load Following Service: A Load Following Service provided by a Rule Participant under an Ancillary Service Contract.

Contracted Load Rejection Reserve Service: A Load Rejection Reserve Service provided by a Rule Participant under an Ancillary Service Contract.

Contracted Spinning Reserve Service: A Spinning Reserve Service provided by a Rule Participant under an Ancillary Service Contract.

Contracted System Restart Service: A System Restart Service provided by a Rule Participant under an Ancillary Service Contract.

Dispatch Support Service: Has the meaning given in clause 3.9.9.

Spinning Reserve Service: Has the meaning given in clause 3.9.2.

System Restart Service: ~~The Ancillary Service described~~Has the meaning given in clause 3.9.8.