



California ISO

# RC West Settlements Working Group

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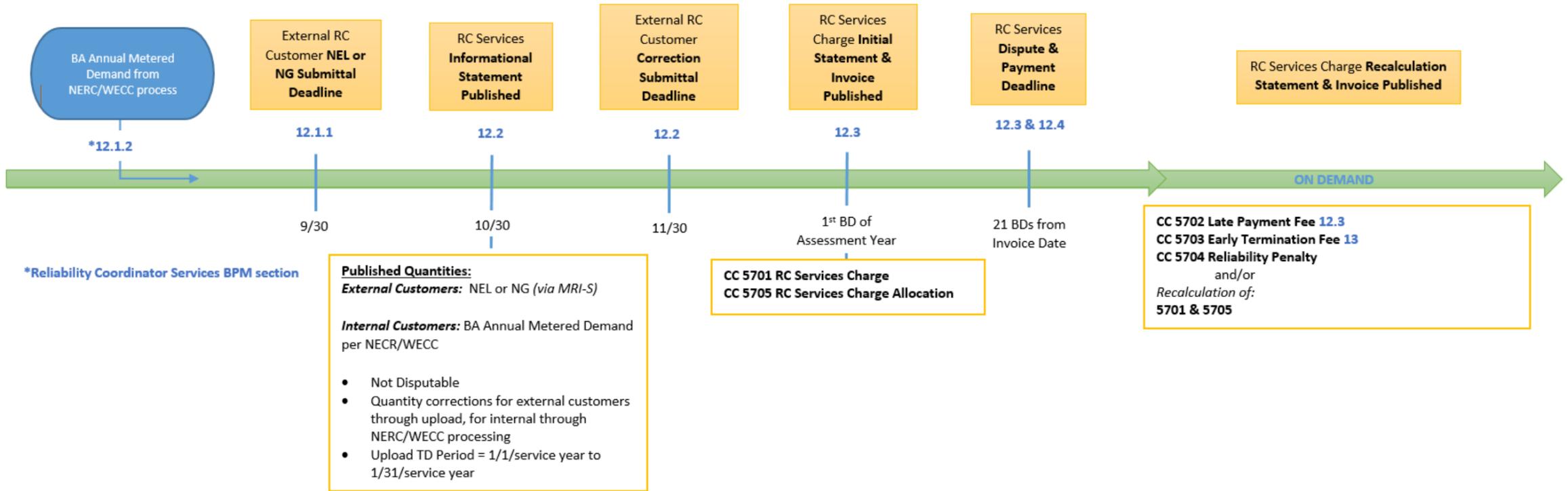
Manager Market Settlement Design and Configuration

June 19, 2019

# Agenda

- Overview of settlement process
- Overview of charge codes
- Overview of the MRI-S interface
  - UI
  - API
- Data Validation
  - Timeline overview
  - Execution details
    - Customer expectations
    - Scenarios
- RC and HANA Services production timeline
- Q&A

# RC Services Settlement Overview



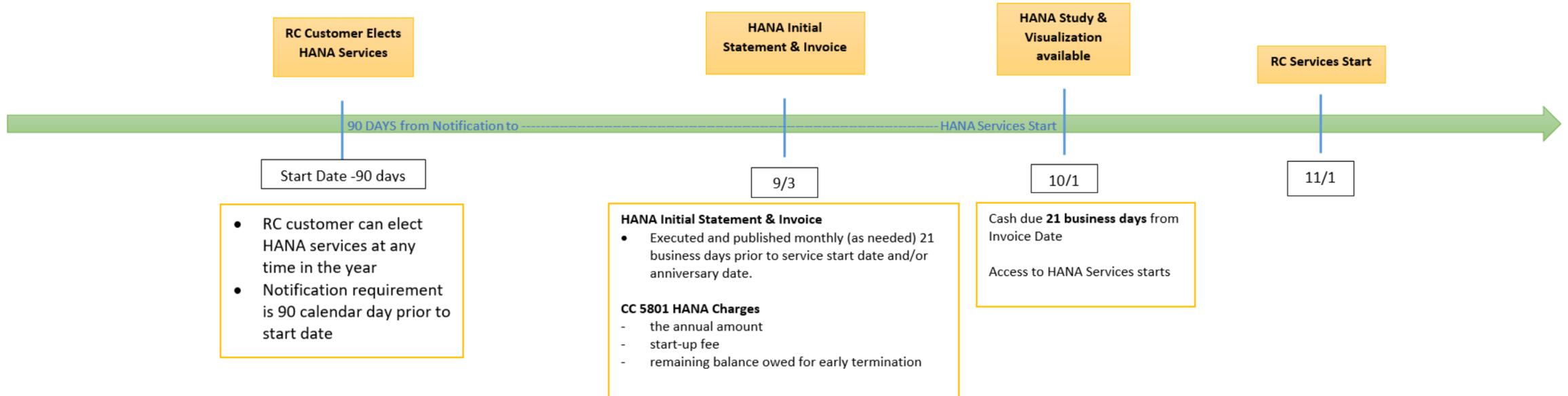
**Timeline Legend**

**YR 1 Example:**  
 1 time manual PTB of 2019 assessment year charges  
 Submittal/Processing Deadlines = 2019  
 Assessment/Service Year = 2020  
 Base Data (MD, NEL, NG) = 2018

**YR 2 Example:**  
 Submittal/Processing Deadline = 2020  
 Assessment/Service Year = 2021  
 Base Data (MD, NEL, NG) = 2019

# HANA Services Invoicing Overview

- 3-year initial commitment, 12 months written notice to exit on anniversary date
- HANA is a monthly invoice that assesses annual fees
- Statement & Invoice are published the same day
- Additional Initial statements and invoices published as needed



# Charge Codes Overview – 5701 & 5705

- **5701 RC Services Charge**
  - Calculates annual RC Services charge to external customers (outside CAISO footprint)
    - Charged to BAs with Load, TOPs within BAAs (with or without load), gen-only BAAs
    - $RC\ Charge = (RC\ Customer's\ submitted\ NEL\ or\ NG) * Annual\ RC\ Services\ Rate$ 
      - If RC Customer does not submit data, Settlements will calculate the RC charge using the customer's default NEL or Installed Capacity value per contract
- **5705 RC Services Charge Allocation (replaces Peak CC 6496)**
  - Allocates annual RC Services charge to internal customers (entities within the CAISO BAA)
    - ISO passes through its share of the RC Charges to SCs within the CAISO BAA that serve load and to TOPs within the BAA
      - TOPs that have no NERC/WECC Metered Demand will receive the minimum charge (\$5,000)
    - $RC\ Charge = (entity's\ share\ of\ the\ total\ NERC/WECC\ Metered\ Demand\ for\ CAISO\ BAA) * Annual\ RC\ Services\ Rate$
- Initial Statement & Invoice published on the first business day of each year
- Not disputable
- Payment is due within 21 business days of invoice date
- Federal entities may choose to make monthly payments of 1/12 of annual invoiced amount
- Invoice issued on 1/2/20 will include 2020 RC charges based on 2018 NEL/NG and prorated 2019 charges based on 2017 NEL/NG

# Charge Codes Overview – Late Payment Penalty (5702) & Default (5701)

- **5702 Late Payment Penalty**
  - Late payment penalty will be assessed if payment for RC Services invoice is not received by the due date
  - One-time \$1,000 charge will appear on supplemental RC Services statement & invoice (Recalc)
  - Federal entities opting for monthly payments of 1/12 of annual invoiced amount are subject to the late payment penalty for each instance of failing to pay by the due date
  - Due date is 21 business days from invoice date
- **5701 Default on RC Charges**
  - Unpaid amounts by defaulting customer will be re-allocated to all other customers in proportion to their original 5701 invoice amount (Recalc)
  - If defaulter pays back the amount in full or partially
    - Repayment amount will be reflected on the next Initial invoice (following year)

# Charge Codes Overview – 5703 & 5704

- **5703 RC Services Early Termination Fee**
  - If RC Customer terminates services before the 18-month initial enrollment period or provides less than 12-month notice in subsequent years
  - One-time charge invoiced on supplemental invoice (Recalc)
  - Due date is 21 business days from invoice date
- **5704 RC Services Reliability Penalty Allocation**
  - Calculation accounts for any reliability-related penalties assessed by FERC, NERC, WECC against the CAISO

# Charge Codes Overview – 5801

- **5801 HANA Charges**

- The CAISO will also offer web-based Hosted Advanced Network Applications (HANA) services to its RC Customers
- Initial 3 year commitment, after which the RC Customer may take HANA services for additional one-year terms
- The CAISO will charge RC Customers that elect HANA services
  - The annual cost for the ongoing software license fee
  - A one-time Set Up fee amortized over the initial 3-year minimum commitment period; and
  - Annual Administrative fee for CAISO support of the HANA services
- RC Customer will be invoiced for HANA services 21 business days prior to when the services commence / anniversary date
- Due date is 21 business days from invoice date
- There is no Recalc for HANA
- If RC Customer adds additional licenses mid-year, Settlements will publish supplemental statement and invoice
- Early Termination Fee will be assessed if the RC Customer terminates the agreement before the expiration date

# Questions



# Overview of MRI-S

- UI Demo
- API screen shots

# Reliability Coordination

[Net Energy Data](#)  
 [RC/HANA Statements](#)  
 [RC/HANA Publication Status](#)

Start Date    
 End Date    
 ENTITY    
 Net Energy Zone    
   

Net Energy Data												
										Rows <input type="text" value="25"/>		
										Current	Previous	
ENTITY	Entity Name	Net Energy Zone	Start Date	End Date	MW Value	Submission Id	Updated By	Updated Date	MW Value	Submission Id	Updated By	Updated Date
			01/01/2020	12/31/2020	375.0000000	904		06/18/2019 10:09	500.0000000	903		06/18/2019 10:09

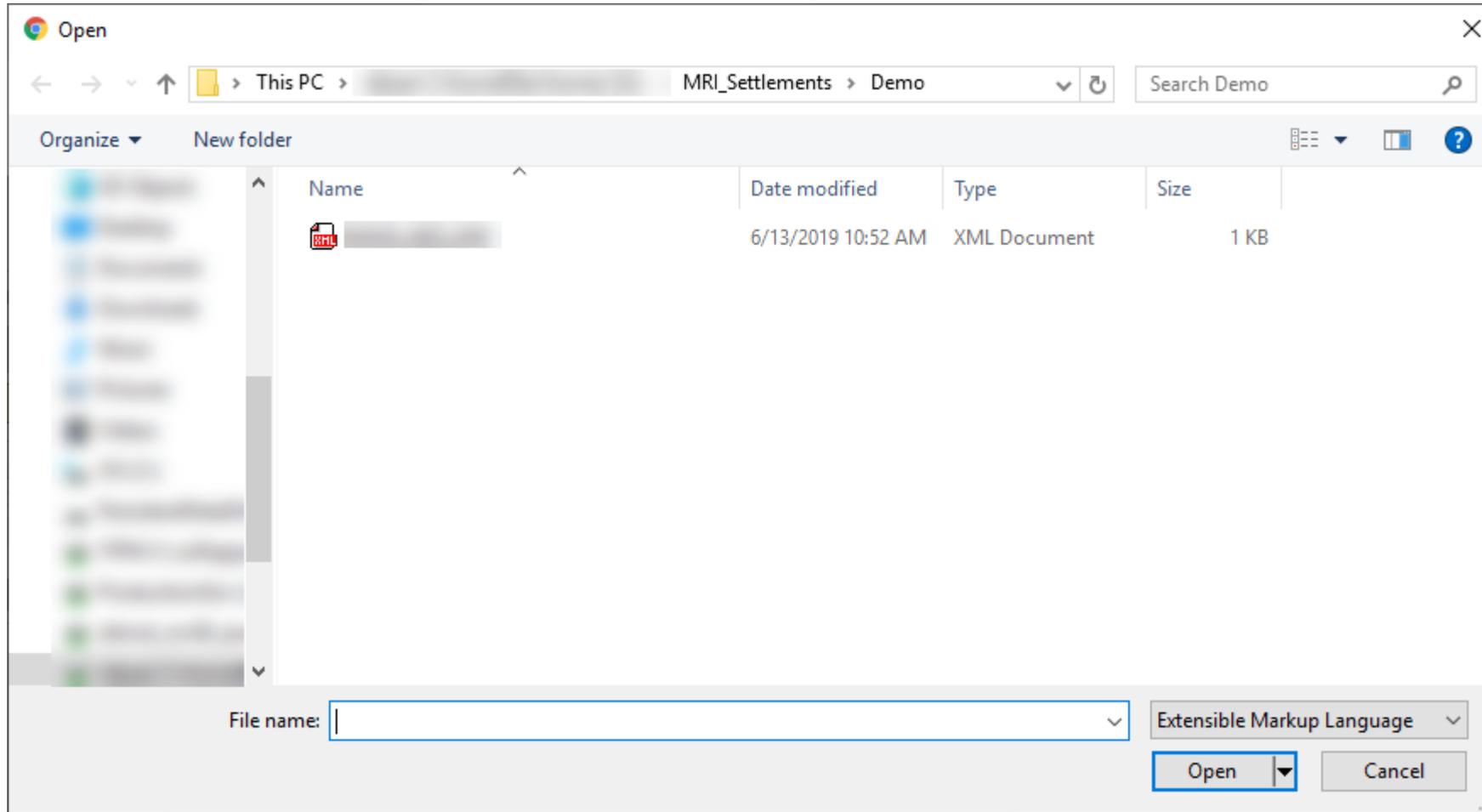
# Net Energy Data

**Upload Net Energy Data File** [Maximize] [Close]

Please select Net Energy Data file and click Upload:

No file chosen

# Net Energy Data



# Net Energy Data

**Upload Net Energy Data File** [X]

Please select Net Energy Data file and click Upload:

Test.xml

File Name:

File Size:

User Id:

0%

# Net Energy Data

 06/19/2019 08:49:51 Net Energy Data Submission is successful.   06/19/2019 08:49 PDT

 06/19/2019 08:50:53 Upload Failed with Below Errors  
Invalid Trade Period   06/19/2019 08:50 PDT

# RC/HANA Statements

Net Energy Data   RC/HANA Statements   RC/HANA Publication Status

File Type  ENTITY  Run Type  Trade Date  Post Date From:

Version

Post Date To:

RC/HANA Statements								
<input type="button" value="Home"/> <input type="button" value="Filter"/> <input type="button" value="XML"/> <input type="button" value="PDF"/>								
SELECT	XML	CSV	PDF	ENTITY	Name	Trade Date	Post Date	Version
<input type="checkbox"/>	<input checked="" type="checkbox"/>				INVOICE-2019051432-RC_SVCS-7-APPROVED-20200101	01/01/2020	05/15/2019	7
<input type="checkbox"/>	<input checked="" type="checkbox"/>				VOICE-2019050632-HANA_INV-2-APPROVED-20200101	01/01/2020	05/07/2019	2
<input type="checkbox"/>	<input checked="" type="checkbox"/>				-INVOICE-2019050631-RC_SVCS_INV-4-APPROVED-20200101	01/01/2020	05/07/2019	4

Settlement files are available for 45 days from date of publication.

# RC/HANA Publication Status

Net Energy Data   RC/HANA Statements   **RC/HANA Publication Status**

Trade Date:    Run Type:    Post Date From:         
 Status:    Post Date To:

RC/HANA Publication Status							
Trade Date	Run Type	Run Number	Status	Version	Planned Post Date	Actual Post Date	Comments
01/01/2020			Published	1	05/06/2019	05/06/2019 13:39	
01/01/2020			Published	1	05/06/2019	05/06/2019 10:55	
01/01/2020			Published	2	05/06/2019	05/06/2019 13:25	
01/01/2020			Published	4	05/06/2019	05/08/2019 12:34	
01/01/2020			Published	2	05/07/2019	05/07/2019 10:58	
01/01/2020			Published	4	05/07/2019	05/07/2019 12:47	
01/01/2020			Published	2	05/07/2019	05/07/2019 12:45	
01/01/2020			Published	7	06/05/2019	06/05/2019 15:10	
01/01/2020			Published	7	05/15/2019	05/15/2019 11:25	
01/01/2020			Published	5	05/18/2019	05/18/2019 15:59	
01/01/2020			Published	6	05/28/2019	05/28/2019 11:03	
01/01/2020			Published	4	06/05/2019	06/05/2019 15:10	

Settlement publication status is available 2 business days prior to the planned post date and 45 calendar days after the actual post date.

# Submit Net Energy Data – API – DocAttach request Sample

```
<?xml version='1.0' encoding='utf-8'>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:stan="http://www.caiso.com/stan">
  <soapenv:Header>
    <ns2:CAISOWSHeader ns3:Id="id-B749C361687192AEFB14544162144704" xmlns:ns2="http://www.caiso.com/stan">
      <ns2:CAISOUernameToken>
        <ns2:Username>CN=ITPM_EXT_RC_RWx10723,OU=People,O=caiso,C=us</ns2:Username>
        <ns2:Nonce>${=System.currentTimeMillis() + ((int)(Math.random()*10000))}</ns2:Nonce>
        <ns2:Created>${=new java.text.SimpleDateFormat("yyyy-MM-dd'T'HH:mm:ssZ").format(new Date())}</ns2:Created>
      </ns2:CAISOUernameToken>
      <ns2:CAISOMessageInfo>
        <ns2:MessageID>100416212778</ns2:MessageID>
        <ns2:Timestamp>
          <ns5:Created>2016-05-11T22:31:10.910Z</ns5:Created>
          <ns5:Expires>2016-05-11T23:31:10.910Z</ns5:Expires>
        </ns2:Timestamp>
      </ns2:CAISOMessageInfo>
    </ns2:CAISOWSHeader>
  </soapenv:Header>
  <soapenv:Body>
    <iso:ISOAttachment>
      <iso:AttachmentValue>H4sIAAAAAAAAAJVSy27CMBAs1L/AaXnxDa0gkYQLtCHBFVV6EO9VFayBUuxXd1OgL+v7SQNU
8sGendmd3fV4uud5rwS1mRSTgEQ46FIZcbEZk8rG/DUTBNLs7HPH4EMxegNocZNBnRnZULHfBJs
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bL/tfEhr1XAof36YJavly+zzce49eqCJ/moqxEEczB1YzO+1hn2iIjfsO2fWxdLnad8tqRDMJG9b
F/EXN1LSvIBkMLx2sepR10Sna1qNUbbpJ1BMZkeZQGR2AX0SYnfWeBRjbi9vzsVapvlvyjguPsWt
oq2JP9Uc2B1QB2nGfLS1diMdpvtfFvsBx1+yKZ8DAAA=</iso:AttachmentValue>
    </iso:ISOAttachment>
  </soapenv:Body>
</soapenv:Envelope>
```

Auth (Basic) Headers (0) Attachments (0) WS-A WS-RM JMS Headers JMS Property (0)

SoapUI log http log jetty log error log wsrm log memory log script log

# Submit Net Energy Data – API – Non-DocAttach request Sample

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:stan="http://www.caiso.com/soa/NetEnergyData_v1.xsd#">
  <soapenv:Header/>
  <soapenv:Body>
    <m:NetEnergyData xsi:schemaLocation="http://www.caiso.com/soa/NetEnergyData_v1.xsd#">
      <m:MessageHeader>
        <m:TimeDate>2001-12-17T09:30:47Z</m:TimeDate>
        <m:Source>String</m:Source>
        <m:Version>v20181001</m:Version>
      </m:MessageHeader>
      <m:MessagePayload>
        <m:NetEnergyZone>
          <m:mRID>NEZ</m:mRID>
          <m:NetEnergy>
            <m:netGeneration>
              <m:multiplicier>M</m:multiplicier>
              <m:unit>Wh</m:unit>
              <m:value>500</m:value>
            </m:netGeneration>
            <m:tradePeriod>
              <m:end>2021-01-01T08:00:00Z</m:end>
              <m:start>2020-01-01T08:00:00Z</m:start>
            </m:tradePeriod>
          </m:NetEnergy>
        </m:NetEnergyZone>
      </m:MessagePayload>
    </m:NetEnergyData>
  </soapenv:Body>
</soapenv:Envelope>
```

# Submit Net Energy Data – API – Response Sample

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <StandardOutput xmlns="http://www.caiso.com/soa/StandardOutput_v1.xsd#">
      <MessageHeader>
        <TimeDate>2019-06-18T17:09:46.437Z</TimeDate>
        <Source>stlmt_app</Source>
        <Version>v20181001</Version>
      </MessageHeader>
      <MessagePayload>
        <EventLog>
          <Batch>
            <mRID>904</mRID>
          </Batch>
          <Event>
            <creationDateTime>2019-06-18T17:09:46.442Z</creationDateTime>
            <description>Successfully received</description>
            <id>e7f26339-a0fd-4d6e-889e-4f8e7b822ca7</id>
            <result>SUCCESS</result>
          </Event>
          <Service>
            <id>b7b7a227-6c59-435d-b5a9-f09c08ff1e53</id>
            <name>submitNetEnergyData_v1</name>
          </Service>
        </EventLog>
      </MessagePayload>
    </StandardOutput>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Headers (8) Attachments (0) SSL Info (3 certs) WSS (0) JMS (0)

## MAP Stage URLs

- Doc Attach:  
[https://wsmap.caiso.com/sst/stlmt/SubmitNetEnergyData\\_STLMTv1\\_DocAttach\\_AP](https://wsmap.caiso.com/sst/stlmt/SubmitNetEnergyData_STLMTv1_DocAttach_AP)
- Non-Doc Attach:
- [https://wsmap.caiso.com/sst/stlmt/SubmitNetEnergyData\\_STLMTv1\\_AP](https://wsmap.caiso.com/sst/stlmt/SubmitNetEnergyData_STLMTv1_AP)

# Data validation timeline overview

- Settlements Data Validation
  - 7/9 – Map-stage opens, verify access and connectivity and start uploading 2018 NEL/NG in MWh
  - 7/10 – ISO to publish sample informational statement on MRI-S with mock up data
  - 7/16 - NEL/NG data upload deadline – submit using Trade Date 1/1/2020
- RC Settlement Scenarios
  - 7/23 - RC West to publish Informational Statement which lists volumes provided in MRI-S for review prior to invoicing
  - 7/24 - 7/25: RC customer timeline to review and validate volumes in Informational Statement and re-submit in MRI-S
  - 7/30 - RC West publish initial statement and invoice for RC charges
  - Week of 8/5 - RC West publish recalc statement and invoice based on scenarios
- HANA Statement and Invoice
  - 7/25 - RC West publish Hana Services Initial for Validation
  - Week of 7/29 - Reserve for additional Hana Services scenarios

# Data Validation Execution Details (7/9/19-8/7/19)

Monday	Tuesday	Wednesday	Thursday	Friday
8	9 Map Stage Environment Opens	10 ISO: Publish sample RC Info Stmt to test connectivity	11 RC Customers: Start MRI-S uploads	12
15	16 RC Customers: MRI-S upload Deadline	17	18	19
22	23 ISO: RC Info Stmt Publication	24 RC Customers: Review RC Info Stmt	25 RC Customers: Review Info Stmt & re-submit deadline ISO: Publish HANA Stmt and Invoice	26 RC Customers: HANA Stmt & Invoice Validation Start
29	30 ISO: Publish RC Initial Stmt and Invoice	31 RC Customers: RC Initial Stmt & Invoice Validation Start	1 ISO: Publish additional HANA scenario Stmt & Invoice	2 RC Customers: HANA additional scenario Stmt & Invoice Validation Start
5	6 ISO: Publish RC Recalc Stmt & Invoice for LPP	7 RC Customers: RC Recalc Stmt & Invoice Validation Start	8	9

Key Dates

RC Customers ACTION

ISO ACTION

HANA scenario

RC scenario

# RC Services Production Timeline

- 9/30/19      **RC Customer** deadline to submit 2018 NEL/NG MWh in MRI-S
- 10/30/19     **RC West** releases Information Statement which lists volumes provided in MRI-S for review prior to invoicing
- 12/2/19      **RC Customer** deadline to validate volumes on Information Statement and re-submit if necessary
- 1/2/20        **RC West** bills for 2019 and 2020 RC Charges
- » The 2019 RC charges will be prorated and based on 2017 NEL/NG MWh
  - » The 2020 RC charges will be based on 2018 NEL/NG MWh
  - » Charges will be on one invoice available in MRI-S
- 1/31/20      **RC Customer** payment due date
- » Federal entity payments are due monthly in 1/12 increments

## HANA Services Production Timeline

- HANA invoices go out 21 business days prior to Customer's official HANA start date.
  - Initial HANA services being offered 10/1/19 with shadow opportunity 09/01/19 – 09/30/19 (only)
  - Annual recurring invoices will be sent out 21 business days prior to RC Customer's anniversary date
  - Invoices will be available in MRI-S
  - Payments are due 21 business days from invoice date
- Supplemental invoices will go out during the year if RC Customer elects to purchase additional subscriptions.
  - Charges will be prorated to co-term to original anniversary date.

# Questions



# Thank You

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