

Renewable Energy Management Centers (REMC)

- Govt. of India has set an ambitious plan for establishing about 175 GW renewable generation capacity by 2022
 - 100GW Solar,
 - 60 GW wind and
 - 15 GW other renewable sources.

RE - Resource locations

- 70% of the total envisaged capacity of Wind & Solar generation (160 GW)
 - mainly in seven (7) RE resource rich states
 - Tamil Nadu, Andhra Pradesh, Karnataka, Maharashtra, Madhya Pradesh, Gujarat and Rajasthan only

REMC Objectives

- Forecasting of RE generation on different levels such as State/region aggregated, pooling station wise etc based on information from Forecast Service provider (FSP) as well as Weather Service provider (WSP).
- Renewable Generation Scheduling
- Real time tracking of generation of RE sources, integration with REMC SCADA & its visualization
- Close coordination with respective LDC for RE generation & integration with existing SCADA

Why REMC

- Existing Control Centers (SLDC/RLDC) don't have RE forecasting system
 - to assess how much RE is needed to be integrated into the grid in various time horizons.
 - poses limitation in integration of RE.
 - crucial in long term planning as well as operation process including for reserves management.
 - Need for integration with scheduling as well as monitoring system.

Solutions

- REMC equipped with above facilities shall address RE integration issues to a large extent.
- also a global best practice
- already under operation in various countries like Spain, Germany, USA, Denmark, Belgium, Australia etc. to facilitate grid integration of RE

Proposed functionalities of REMC

- Co-located with respective SLDCs
- Forecasting of RE generation on different levels such as State/region aggregated, pooling station wise etc based on information from Forecast Service provider (FSP) as well as Weather Service provider (WSP).
- Renewable Generation Scheduling
- Real time tracking of generation of RE sources, integration with REMC SCADA & its visualization
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- RE Forecasting tool output shall be available in Day ahead as well as Intra Day time period
- support SLDC and RLDC in conventional generation scheduling, dispatching, balancing need assessment, grid operation planning, load flow calculation etc.
- Real time monitoring of RE generation - REMC SCADA

Target Beneficiaries

Establishment of REMC is envisaged (11 Locations)

- Southern Region (Tamil Nadu, Andhra Pradesh, Karnataka SLDCs & SRLDC), -4 Loc
- Western Region (Gujarat, Maharashtra, Madhya Pradesh SLDCs & WRLDC) – 4 Loc
- Northern Region (Rajasthan SLDC & NRLDC) & NLDC, - 3 Loc

will benefit all these states in particular and nation in general

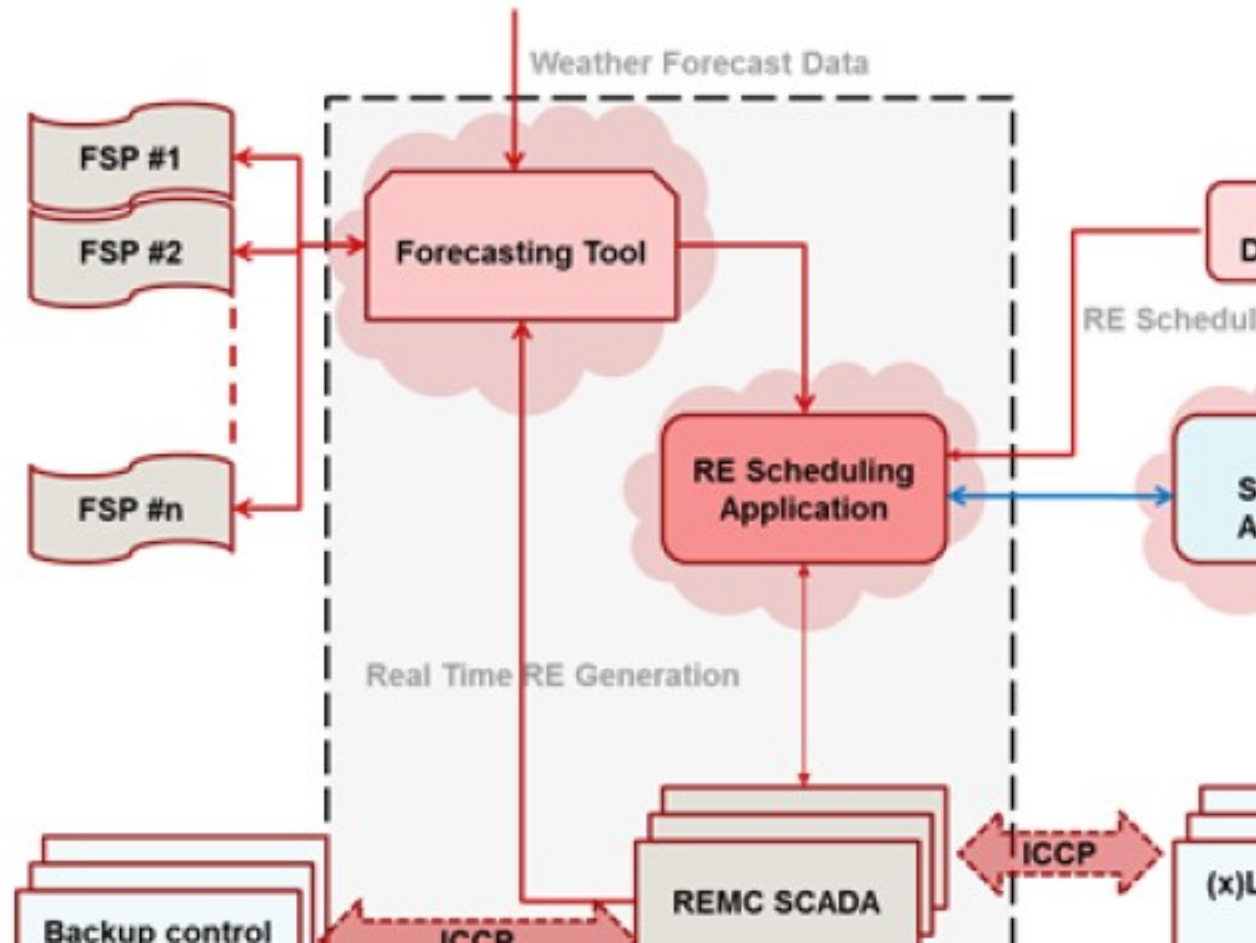
Management

- Owner of REMC shall be respective SLDCs, RLDCs & NLDC.
- PGCIL shall be the implementing agency for REMCs system as part of a consultancy assignment.
- PGCIL will hand over the REMC upon its commissioning to respective owners (SLDC/RLDC-POSOCO).

Financing

- Total Cost – Rs.409 Cr
 - Includes 10% Proj Management Consultancy charge
- GBS allocation of funds from MoP
- Completion – progressively in 2018-19

REMC System Architecture



Thank you