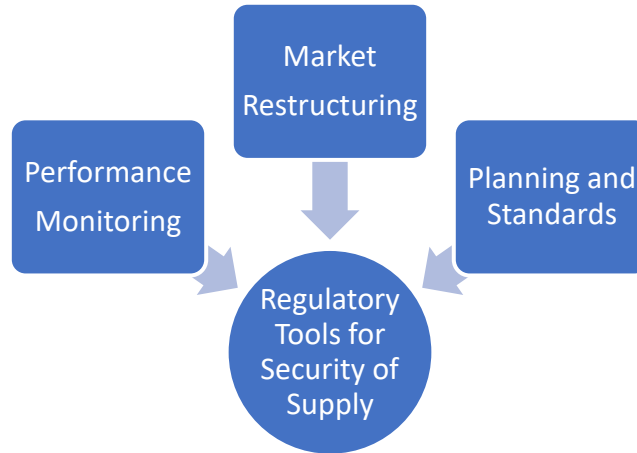


ECRA's Regulatory Approach to Maintaining Security of Supply

Introduction

Security of electricity supply is a priority for Saudi Electricity and Co-Generation Regulatory Authority (ECRA). This paper sets out our approach to maintaining security of supply in response to significant demand growth and continuity of supply as shown below.



A. The Electricity Industry Restructuring Plan (EIRP)

The development of open, competitive markets has the potential to deliver security of supply benefits for KSA. It opens up possibilities for greater supply diversification, mitigating local supply risks, allows flexible trading within and between neighboring countries, and the delivery of electricity supply on an economically efficient basis. EIRP outlined the steps for the unbundling the electricity industry and moving away from the current vertically integrated structure and included creating:

- An independent transmission network owner /operator.
- A Principal Buyer, to manage the procurement and supply of electricity
- A “wheeling” tariff for transmission.
- In future, Competition in wholesale electricity for generators and distribution companies / large consumers.

B. Planning and Standards

To monitor Security of Supply, several documents have recently been developed.

i. Generation Expansion Planning Criteria

Generation expansion planning ensures that there is sufficient generation plant available to meet future demand. Generation planning is carried out based on economic criteria. The choice of technologies significantly impacts the energy policy objectives of KSA, namely, maintaining a secure energy supply.

ii. Distribution Security of Supply

The distribution network has a variable security standard on distribution feeders. The adopted standard is based on the volume of energy, reflecting cost efficient approach, where small loss of loads are restored in repair time up to N-1 with no loss of load for larger areas.

The Security Standard dictates a level of security to ensure that as the demand group increases, for one or more outage the design ensures security through alternate means.

iii. Transmission and Distribution Capability Statements

ECRA has developed a Transmission and Distribution Capability Statement for National Grid-SA and SEC to prepare annually. They achieve several objectives including:

- to assess the security of supply, reliability and compliance
- Describes the status network up to 10-Years ahead
- Presents connection opportunities with sufficient information to carry out assessments of network capability.

iv. Renewable Generation

ECRA issued regulations and has revised the Codes and introduced standards to allow renewable generation in Saudi Arabia. Initiatives include:

- Grid and Distribution code amendments to enable connection of renewable generation
- Small scale solar PV Regulations for installation

v. Key Performance Indicators

ECRA developed Key Performance Indicators (KPIs) regulatory framework with 26 KPIs that are audited annually and publish on our website.

Recently introduced guaranteed standards shift the customer service to a proactive system, i.e. complaint prevention and set a minimum level of service which is enforced through a threshold level.

Conclusion

We are confident that the current arrangements are sufficient to identify credible threats to security of supply and is appropriate to enhance security of supply. ECRA will continue to assess the appropriateness of the current framework and identify where any improvements can be made.