

Tutorial: Evolution and Effectiveness of Flexibility Products in Markets and Operations - Intro



ESIG

ENERGY SYSTEMS
INTEGRATION GROUP

Julia Matevosyan

Chief Engineer

ESIG

10/24/2022

Energy Systems Integration Group



- Energy Systems Integration Group is a non-profit membership-base educational association that provides workshops, discussion forum, resources and education on the evolving electricity and energy systems.
- ESIG supports engineers, researchers, technologists, policymakers and the public with the transformation of energy systems in a way that is economic, reliable, sustainable, thoughtful and collaborative.
- Through a number of working groups ESIG facilitates member discussions on the latest challenges related to energy systems transformation.
- ESIG independent and trusted, forward leaning but not advocating, keeping everyone at the table

<https://www.esig.energy/>



190 Members Globally

Tutorial: Evolution and Effectiveness of Flexibility Products in Markets and Operations – Intro



- With growing shares of variable energy resources, the need for flexibility on the grid is also increasing.
- This is driven by increased need for ramping capability to be committed and dispatched to address system net load variability and uncertainty between day ahead and real time and within real time economic dispatch look ahead periods.
- Some system operators have introduced flexibility products to manage this issue.
- The tutorial will first provide background on the design and implementation of such products, focusing on the general needs for flexibility, how requirements are set and other potential options for obtaining flexibility beyond new products.
- Then, a panel of system operators will provide information on their flexibility.
- A panel discussion will wrap up the session.

Questions to Address



- Generation mix, peak load, min load, load characteristics (any special seasonal or daily patterns worthwhile mentioning)
- What are current sources of flexibility?
- How/when/why did you identify flexibility deficit and need for the flexibility product?
- What are technical requirements for the flexibility product, how it is procured, how do resources qualify, how availability of the product is ensured in real time and how their performance is monitored?
- How and when (how long ahead) the requirements for the flexibility product are determined? Can the required quantities be updated closer to real time based on the needs?
- Is flexibility product(s) you have effective, sufficient? Are there any planned next steps to address the deficit?
- Have you seen new investment in flexible capacity since this product was introduced?