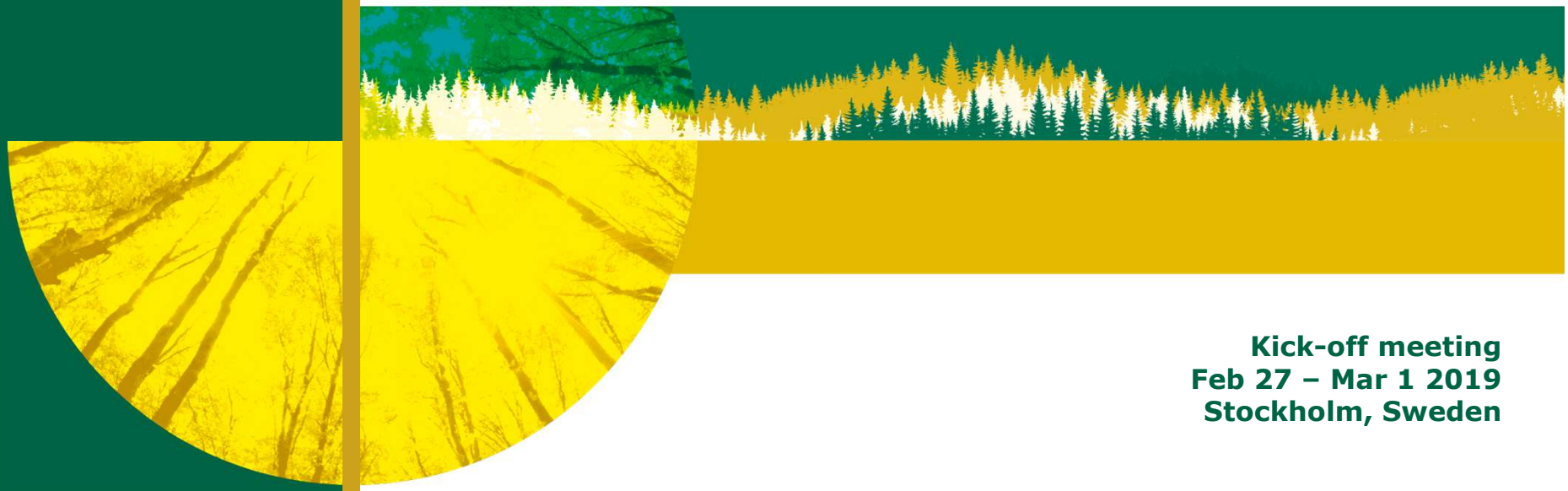
IEA Bioenergy

Flexibility from bioenergy

Collaborative project



Kick-off meeting
Feb 27 – Mar 1 2019
Stockholm, Sweden

Task 44 – Flexible Bioenergy and System Integration

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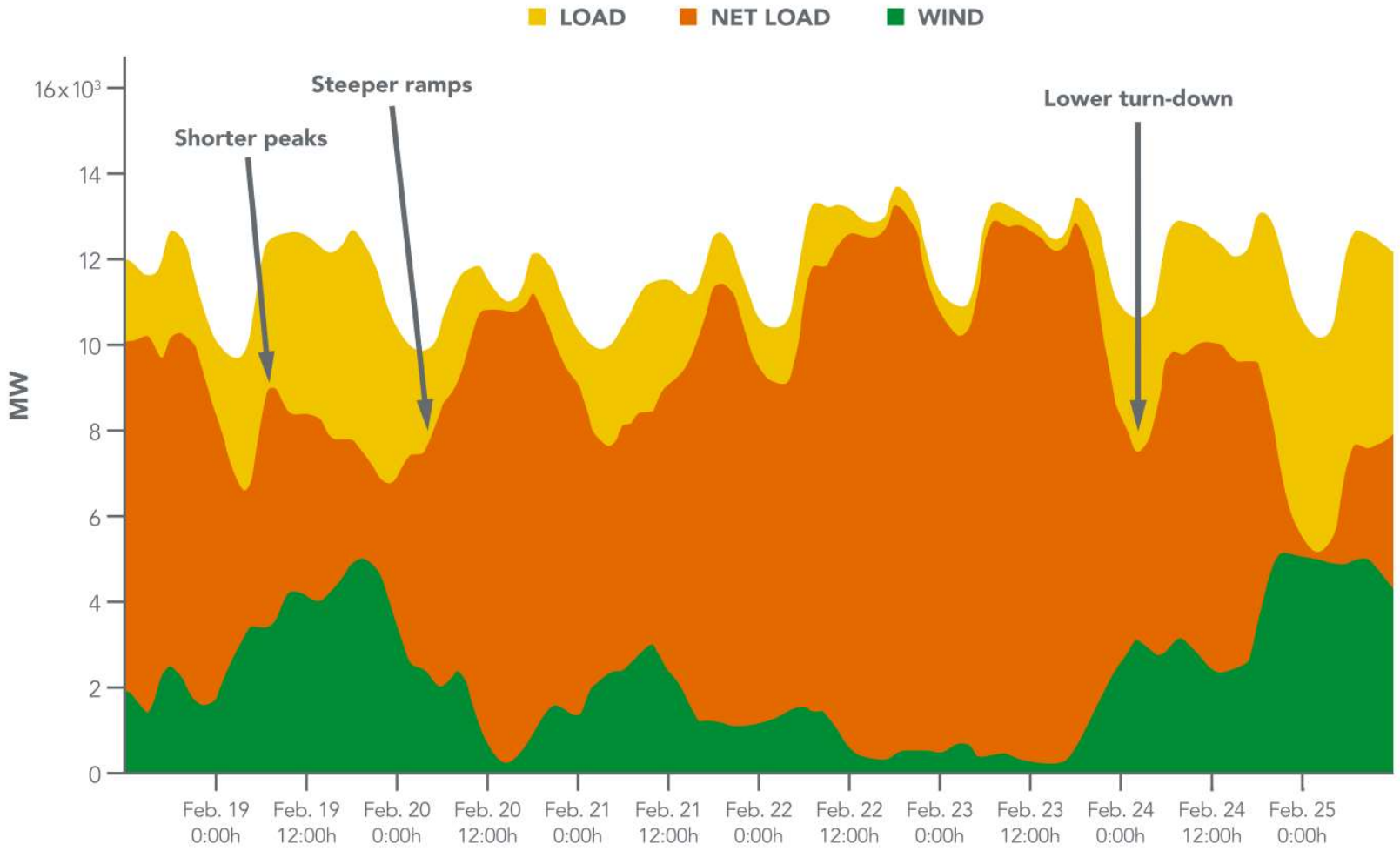
Need for flexibility

- Variability and uncertainty are not new phenomena for an energy system
- All power systems have some inherent level of flexibility to balance supply and demand at all times
- Increasing supply from variable renewable energy
  -> greater the need for flexibility
  - Steeper ramps
  - Lower output
  - Shorter peaks

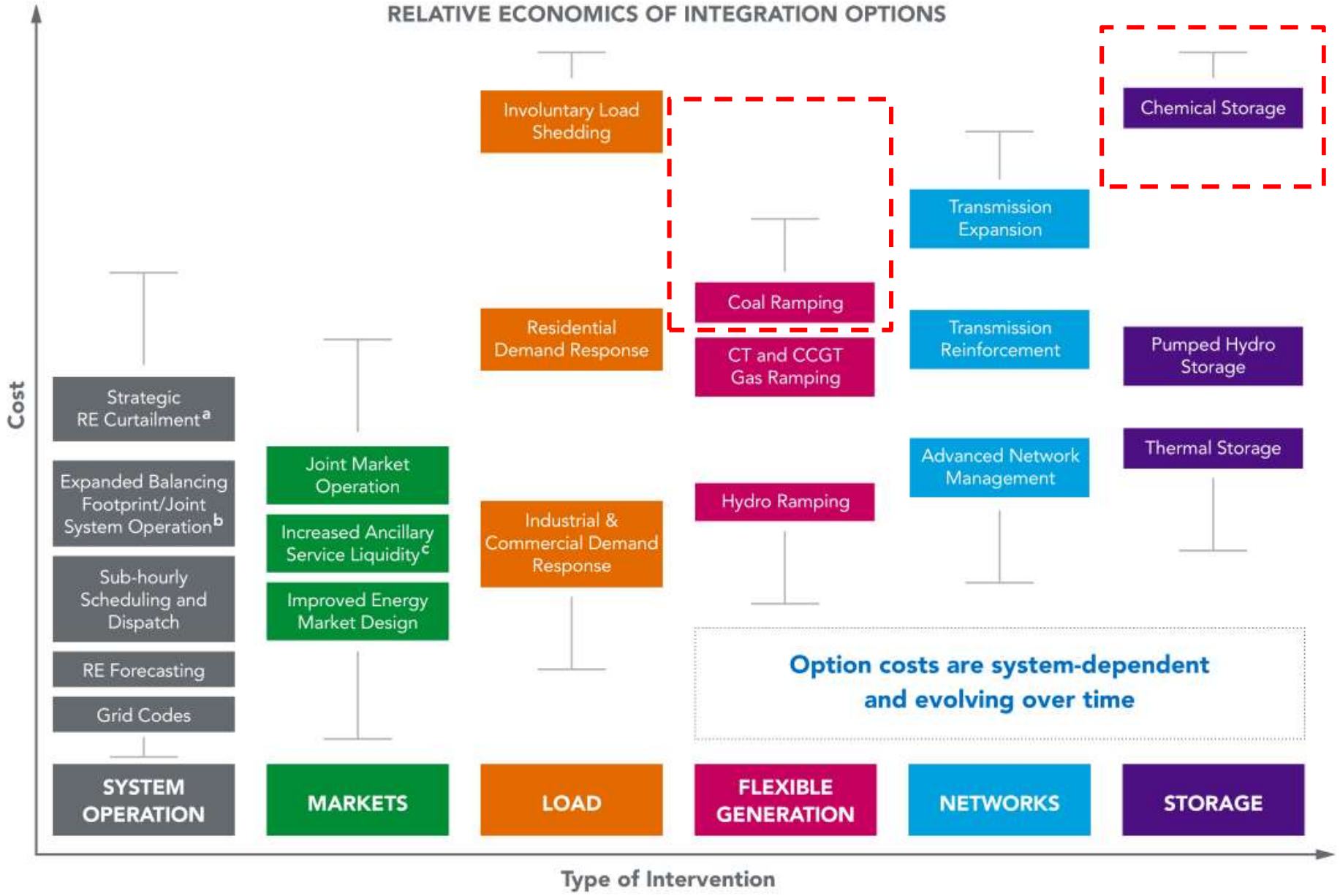


Source: Flexibility in 21st Century Power Systems

Flexible resources

- Several types of flexible resources exist:
  - Flexible generation,
  - Flexible transmission,
  - Flexible demand-side resources,
  - Flexible system operations

- Flexible system might reduce environmental impact
  - Increased optimisation and efficiency
  - Reduced curtailment from VRE



Source: Flexibility in 21st Century Power Systems

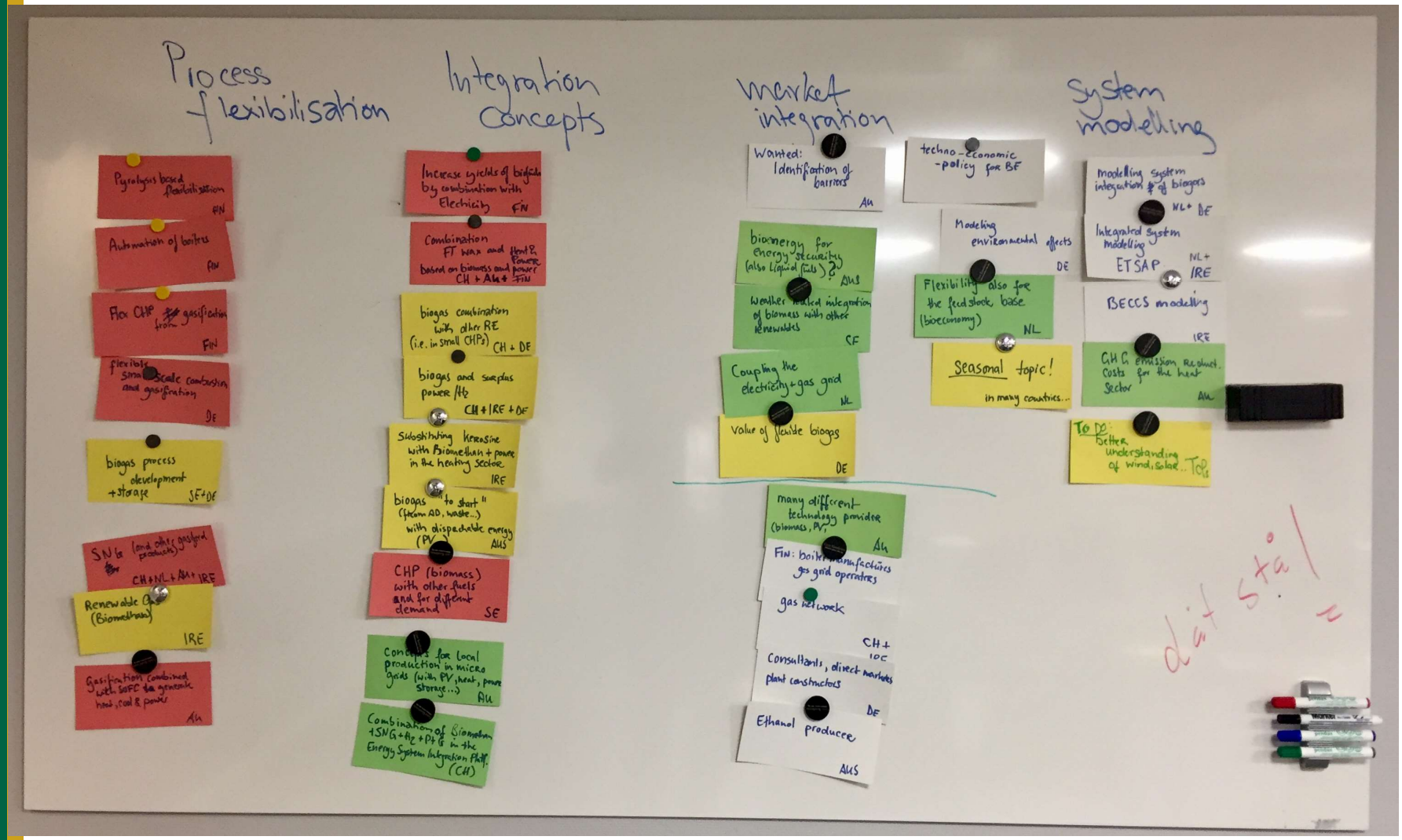
Task 44 Work programme

WP1 - Flexible bioenergy **concepts** for supporting low-carbon energy systems,

WP2 - Acceleration of **implementation**,

WP3 - **System requirements** for bioenergy concepts,

WP4 - Intertask projects and **collaborative** projects.



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Project set-up

- **Activity 1: Overview of flexible bioenergy technologies and solutions** (mainly involvement of energy technology-related tasks)
- **Activity 2: Roadmap for flexible bioenergy and system integration of renewables** (mainly involvement of energy system-related tasks)
- **Activity 3: Webinar presenting the roadmap**