Development of EL3 and ES models for ELR representation

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This document contains "forward-looking statements" – that is, statements related to future events that by their nature address matters that are, to different degrees, uncertain. For details on the uncertainties that may cause our actual future results to be materially different than those expressed in our forward-looking statements, see http://www.ge.com/investor-relations/disclaimer-caution-concerning-forwardlooking-statements as well as our annual reports on Form 10-K and quarterly reports on Form 10-Q. We do not undertake to update our forward-looking statements. This document also includes certain forward-looking projected financial information that is based on current estimates and forecasts. Actual results could differ materially. to total risk-weighted assets.]

NON-GAAP FINANCIAL MEASURES:
In this document, we sometimes use information derived from consolidated financial data but not presented in our financial statements prepared in accordance with U.S. generally accepted accounting principles (GAAP). Certain of these data are considered "non-GAAP financial measures" under the U.S. Securities and Exchange Commission rules. These non-GAAP financial measures supplement our GAAP disclosures and should not be considered an alternative to the GAAP measure. The reasons we use these non-GAAP financial measures and the reconciliations to their most directly comparable GAAP financial measures are posted to the investor relations section of our website at www.ge.com. [We use non-GAAP financial measures including the following:

- Operating earnings and EPS, which is earnings from continuing operations excluding non-service-related pension costs of our principal pension plans.
- GE Industrial operating & Verticals earnings and EPS, which is operating earnings of our industrial businesses and the GE Capital businesses that we expect to retain.
- GE Industrial & Verticals revenues, which is revenue of our industrial businesses and the GE Capital businesses that we expect to retain.
- Industrial segment organic revenue, which is the sum of revenue from all of our industrial segments less the effects of acquisitions/dispositions and currency exchange.
- Industrial segment organic operating profit, which is the sum of segment profit from all of our industrial segments less the effects of acquisitions/dispositions and currency exchange.
- Industrial cash flows from operating activities (Industrial CFOA), which is GE's cash flow from operating activities excluding dividends received from GE Capital.
- Capital ending net investment (ENI), excluding liquidity, which is a measure we use to measure the size of our Capital segment.
- GE Capital Tier 1 Common ratio estimate is a ratio of equity

Outline

Overview of updated MARS unit types

Application to ELRs

Timeline / testing plan

Overview of updated MARS unit types

Next MARS version will include improved modeling of energy-limited resources:

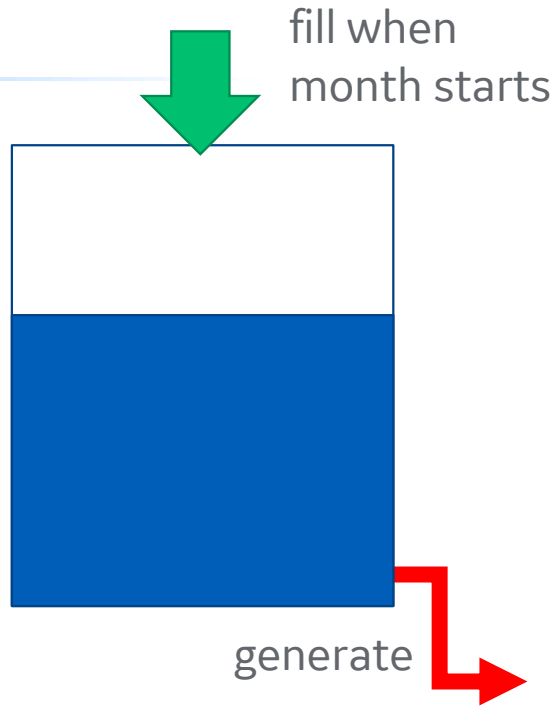
- More powerful
- New dynamic energy storage (ES) model

Both models share significant portions of the modeling, but capture different unit types

Energy-limited type 3 (EL3) model

Used to represent units that have:

- Energy budget (MWh) to be used in a month
- Maximum generation output (MW)
- Optionally, minimum generation (MW), *e.g., run of river output*
- Optionally, ability to transfer unused energy from one month to another



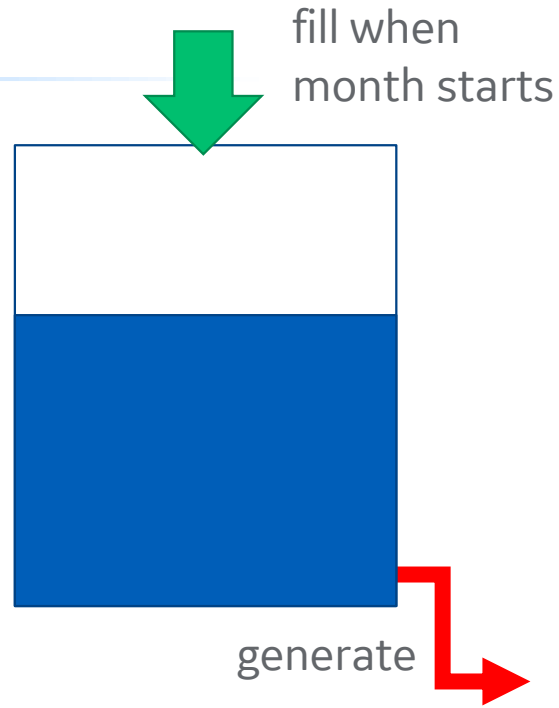
Think of a storage tank that you fill at the beginning of the month and you use when you need it

Energy-limited type 3 (EL3) model – additional constraints

Additional constraints may include

- Limit hours/days per year
- Limit hours/days per month
- Limit hours/energy per day

These are optional but can be used specific operational constraints or contract restrictions



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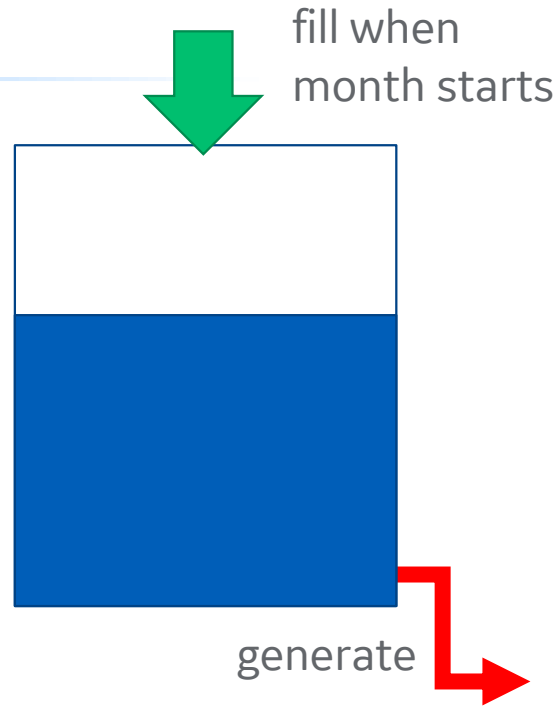
Energy-limited type 3 (EL3) model – when is it called?

- MARS first considers the balance of capacity/load
- Area and pool exchanges are considered
- If there is a shortage, the EL3 unit will attempt to dispatch:
  - Subject to limits of available capacity/energy
  - Subject to limits of use
  - Subject to transmission limits



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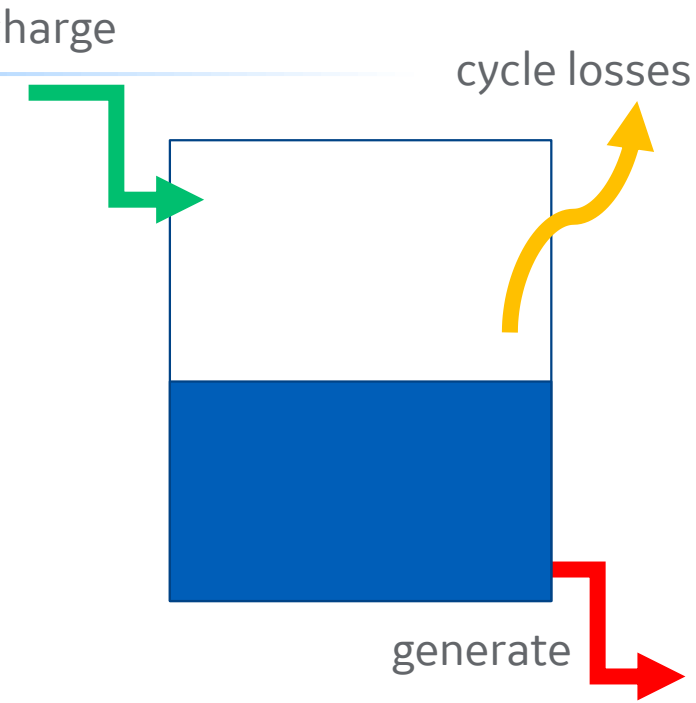
Energy storage (ES) model

Used to represent units that have:

- Capacity storage (MWh)
- Maximum generation output (MW)
- Ability to refill the storage (MW) when not generating
- Optionally, round-trip efficiency (%) to represent losses in the charge/generate cycle



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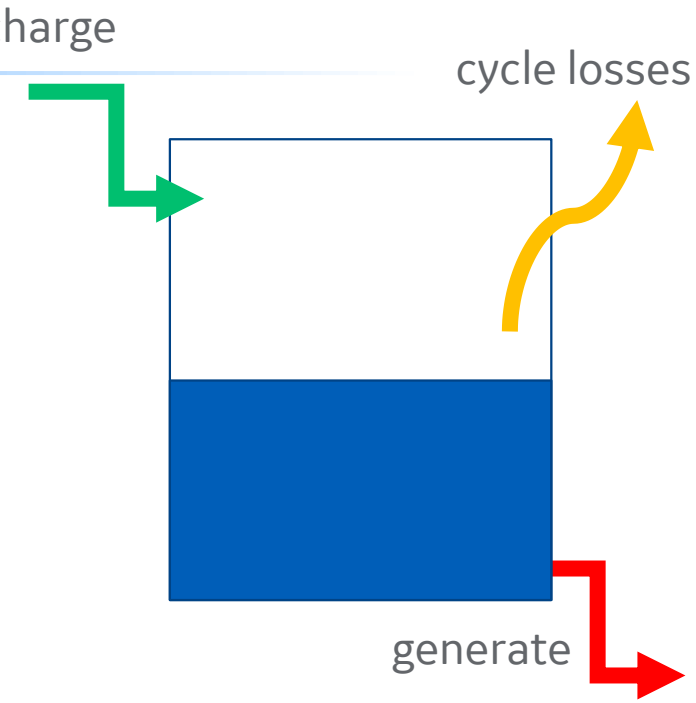
Energy storage (ES) model – when is it called?

Same time that EL3 units are considered, limited to:

- Capacity and energy balance
- Transmission constraints
- Usage limits (if defined)

If not used for an hour and there is available excess capacity, it will attempt to charge

- Limited to charging capacity, transmission
- Charge from excess capacity
- Don't use EOP or reserves



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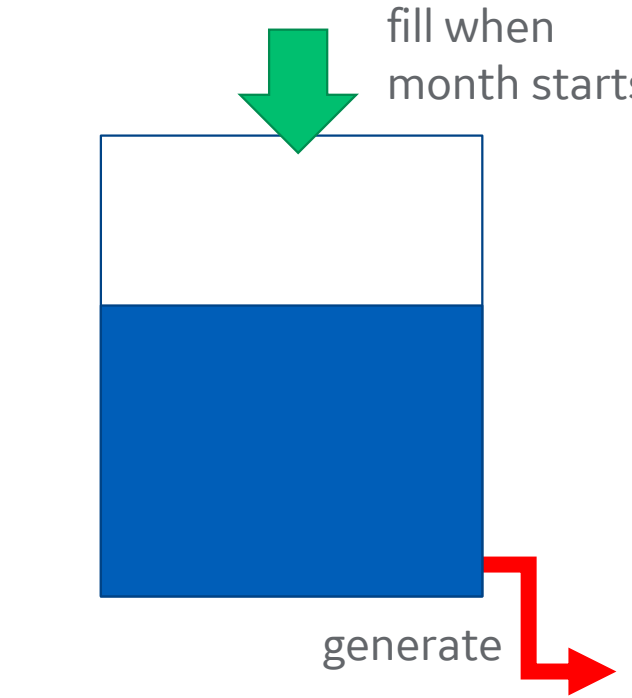
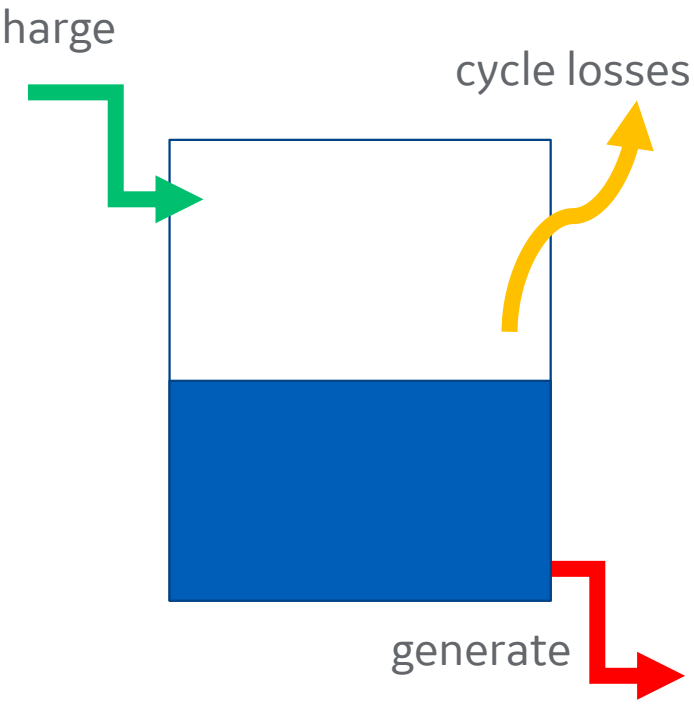
EL3 vs. ES: possible usage to model ELRs



Hydro without pumping

Demand response contracts



Pumped hydro storage

Battery

Generalized modeling

All modeling to date is general, not specific to NYISO and NYSRC's needs

Other NPCC Areas studying adoption for hydro, contract modeling

Other features added:

- Control number of calls (one or more consecutive hours)
- Control during which EOPs the unit can generate
- Enable disable charging and/or generation by hour of day (to better align with operational profiles)

Advantages over a fixed shape

Determining a fixed shape requires an initial run to know what hours of the day the generation is typically needed

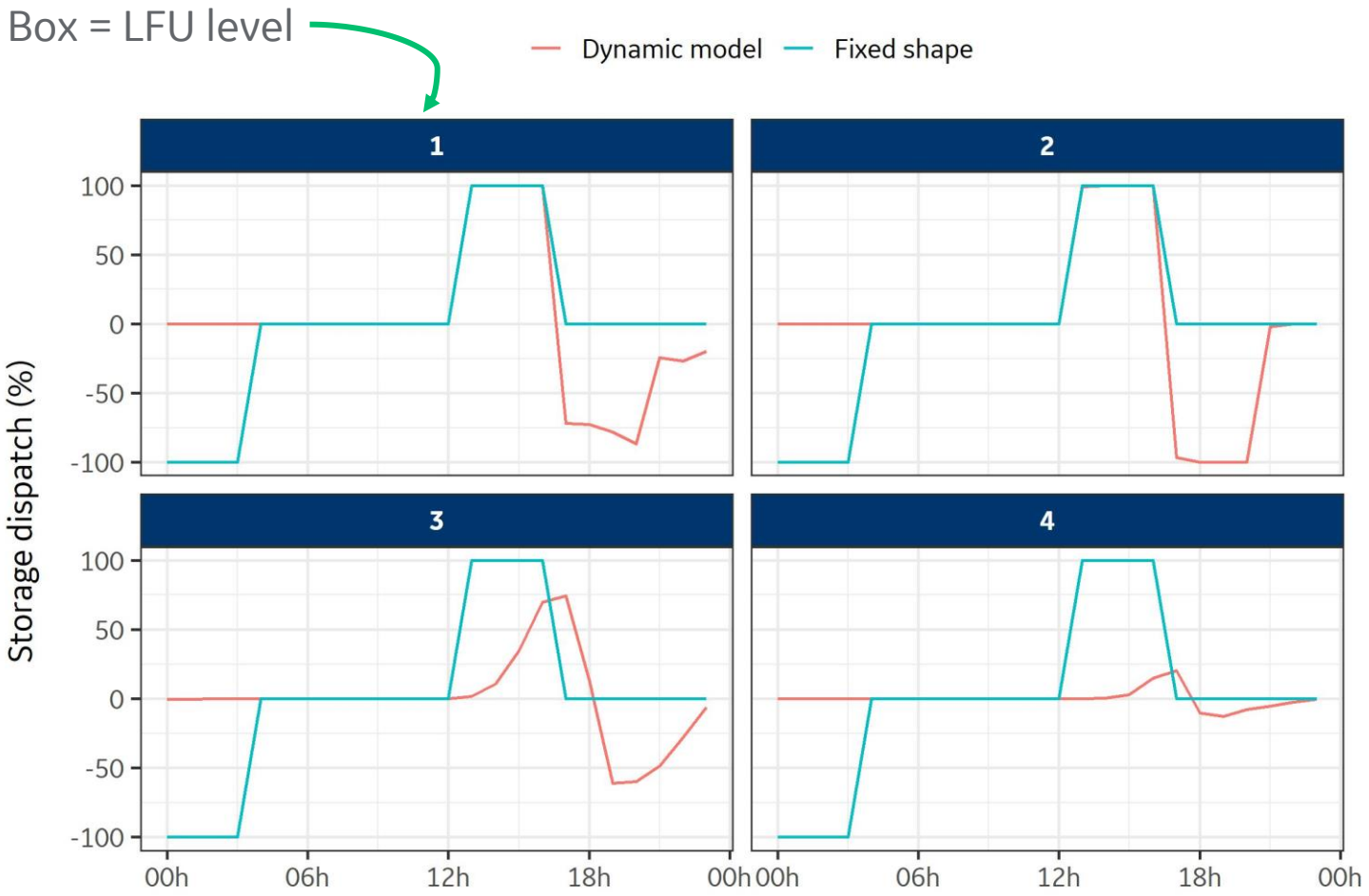
Risks of fixed shapes:

- "Overfitting" the model (too much knowledge of NYCA LOLE)
- Not robust over different scenarios (e.g., a high-solar scenario)
- Fixed shape behaves the same for all load forecast uncertainty

EL3/ES models require fewer assumptions/inputs/knowledge

- More robust over wider range of scenarios
- LOLE results may be higher/lower, not guaranteed to outperformed fixed shape

Comparison of fixed shape vs. dynamic modeling
4 hours of storage



- Levels 1 and 2 generate at the same hours, full output
- Levels 3 and 4 don't use 100% of output, but generate over a wider window, later
- Storage charges as soon as they are able

Timeline

- November-January: Model development
- February: Testing with IRM model
- March: Preliminary results for review
- April: Draft version of white paper, summarizing modeling and results of the testing on the IRM model