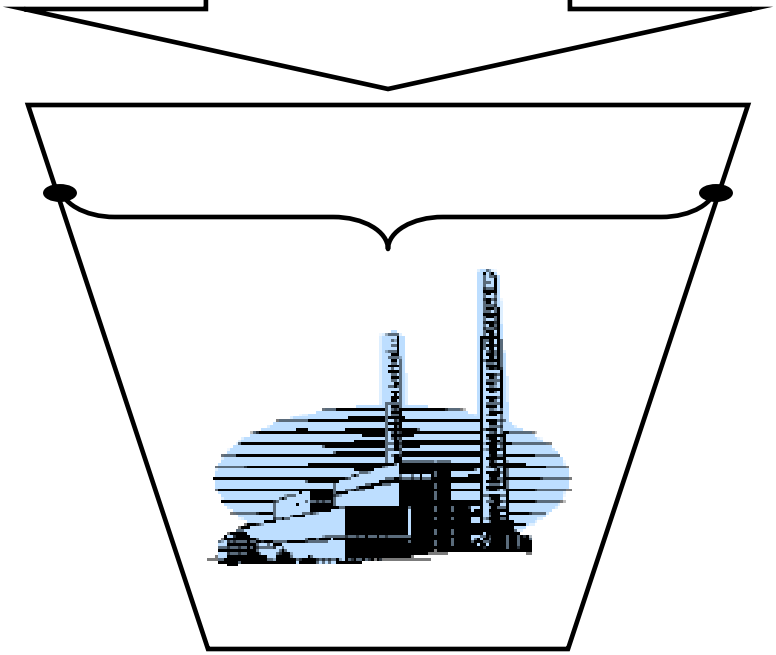
Capacity Adequacy in Load Pockets



What is a Load Pocket?

A high load concentration that exceeds transmission capabilities and frequently requires local generation for support and to provide reliability for contingencies.

NYSRC Reliability Rules for NYC

- **I-R1**: Operating Reserves and Unit Commitment based on second contingency

- **I-R2**: NYISO to insure sufficient 10 min operating reserve maintained in NYC zone

138 kV Load Pocket

- Astoria –

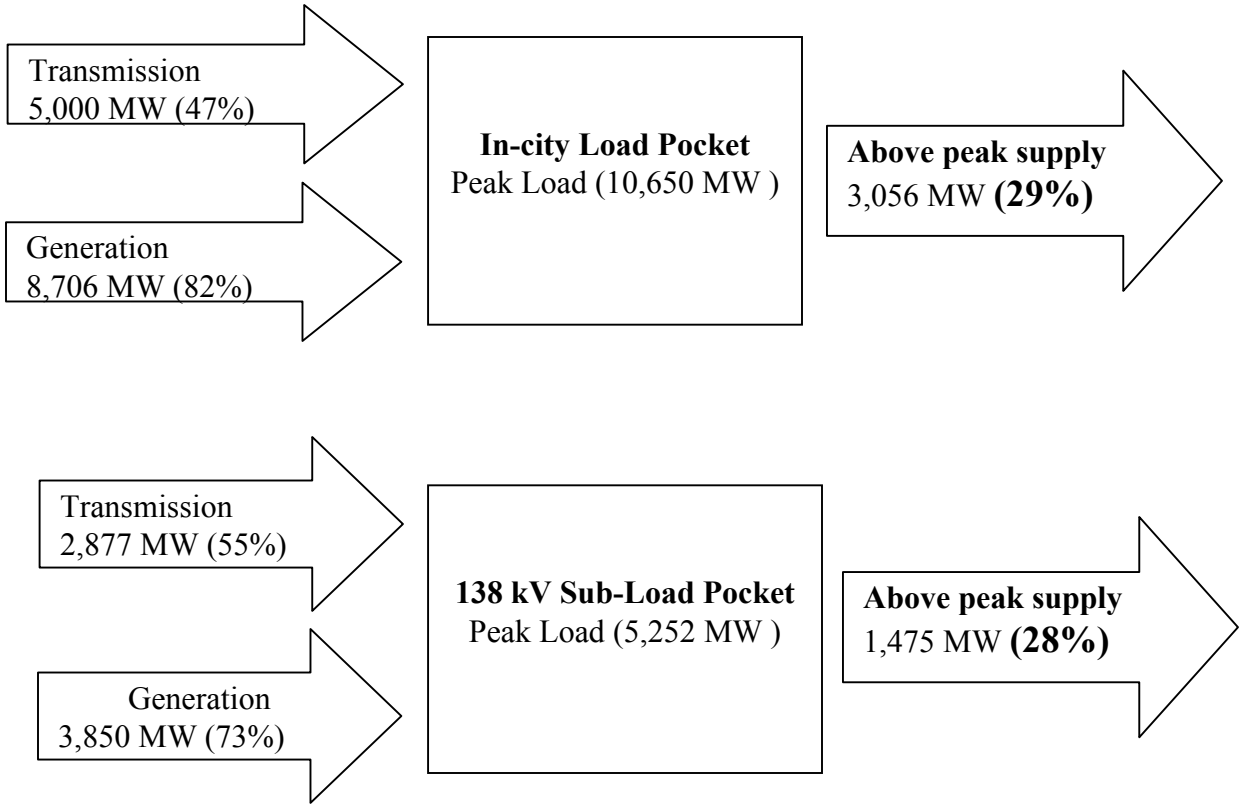
  (Supplied by 3 generating facilities)
- Vernon –

  (Supplied by 2 generating facilities)
- Greenwood / Staten Island –

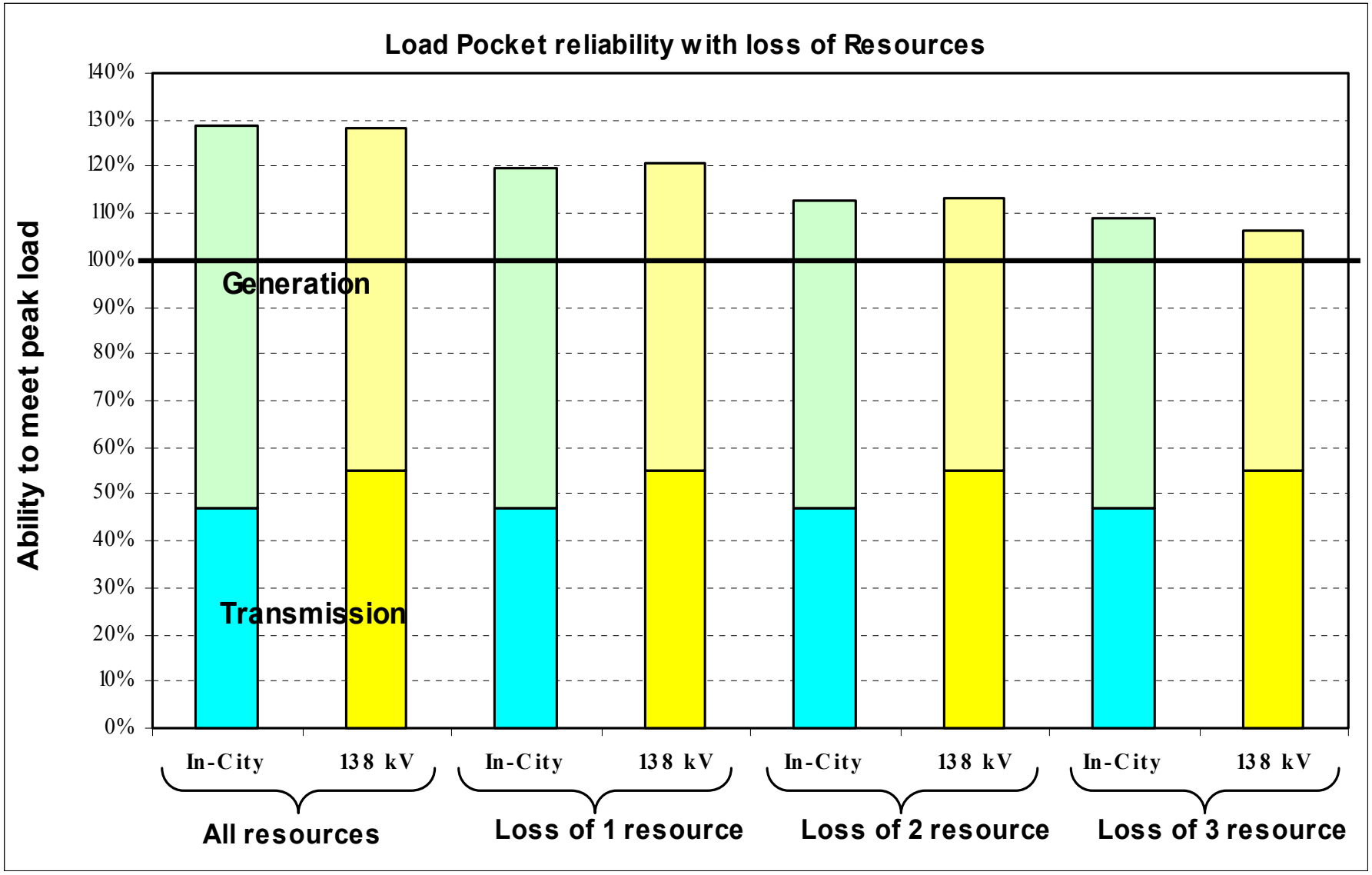
  (Supplied by 4 generating facilities)

In-city and 138 kV Load pocket

Current facilities have Comparable Reliability



Effect on Reliability with loss of Resources



Concerns of Current Capacity Market

- UCAP does not recognize resource locational value in Sub-zones, which may be more critical to reliability.
  - In a surplus capacity market, the marginal generating unit, required for reliability in a sub-load pocket, may not receive UCAP revenues.
  - UCAP units outside of sub-load pockets can not deliver when there is congestion.

Next Steps

Organize task force to develop and recommend solutions

Possible Options

1. Increase State and in-city reserve margins to account for uncertainties of where units are located in sub-load pockets.
2. Lower the in-city reliability below the 1 day in 10 year standard.
3. Force all LSE's to sign long term contracts with the necessary sub-load pocket resources.
4. Develop new market rules to include the sub load pocket locational requirements in the selection of resources.

Examples of potential market solutions

Selection of uneconomic ICAP to meet sub-load pocket requirements

- Extend the in-city reliability study to the 138 kV sub-load pockets, using second contingency analysis to determine minimum capacity requirements in sub-load pockets.
- Prior to clearing an economic only capacity auction, the NYISO selects resources out of economic merit to meet the requirements, unnecessary units are de-list from auction.
- Clearing prices are then determined from remaining resources.

Conduct a two phase in-city auction

- First auction meets sub-load pocket requirements and second auction conducted to meet remaining in-city (80%) requirement.

Task force responsibilities

- Determine severity of problem
- Analyze feasible solutions
- Report back to ICAPWG with recommended actions
- Develop tariff changes if necessary