

**Caithness Long Island
Energy Center**
A Combined-Cycle Power Plant

Caithness Long Island, LLC

Caithness Energy, LLC



- NY-based independent power company
- >20 years experience developing, financing, operating power plants
- Owner, operator or manager
 - >3000 MW of projects in total
 - 1450 MW natural gas

Foote Creek IV—Wyoming

Caithness projects

SEGS Solar —Harper Lake, CA

- Pioneering renewable energy generator
 - Geothermal: 350 MW
 - Wind: 340 MW
 - Solar: 160 MW
 - Hydro: 28 MW
- Natural gas
 - 1450 MW
 - New York, Nevada, Florida, South Carolina, California

Dixie Valley Geothermal—Nevada



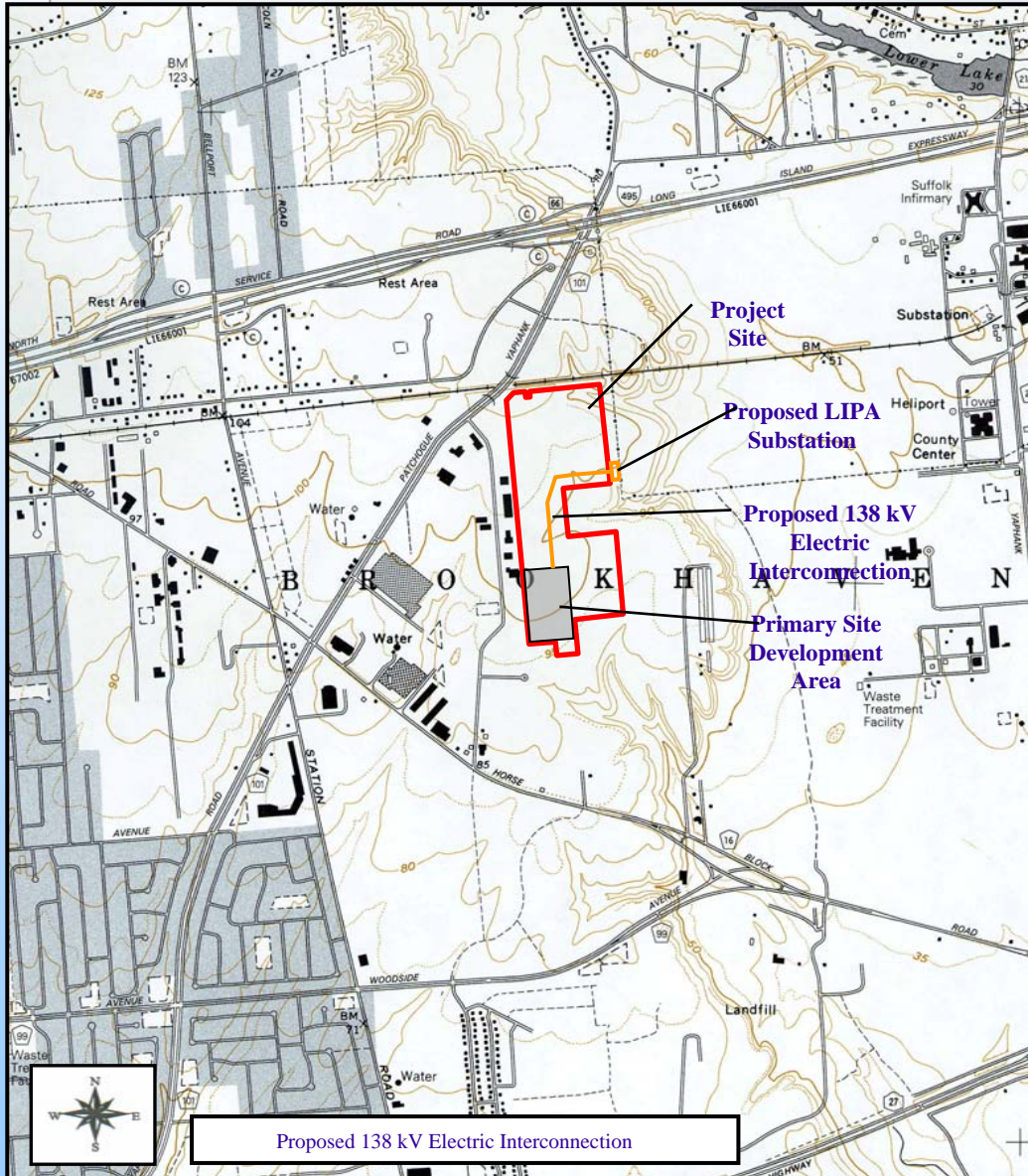
Caithness Long Island—summary



- 350 MW
- Combined-cycle
- Natural gas-fired with oil backup
- Air-cooled steam condenser
- State-of-art air emissions control system
- Plant footprint: <15 acres

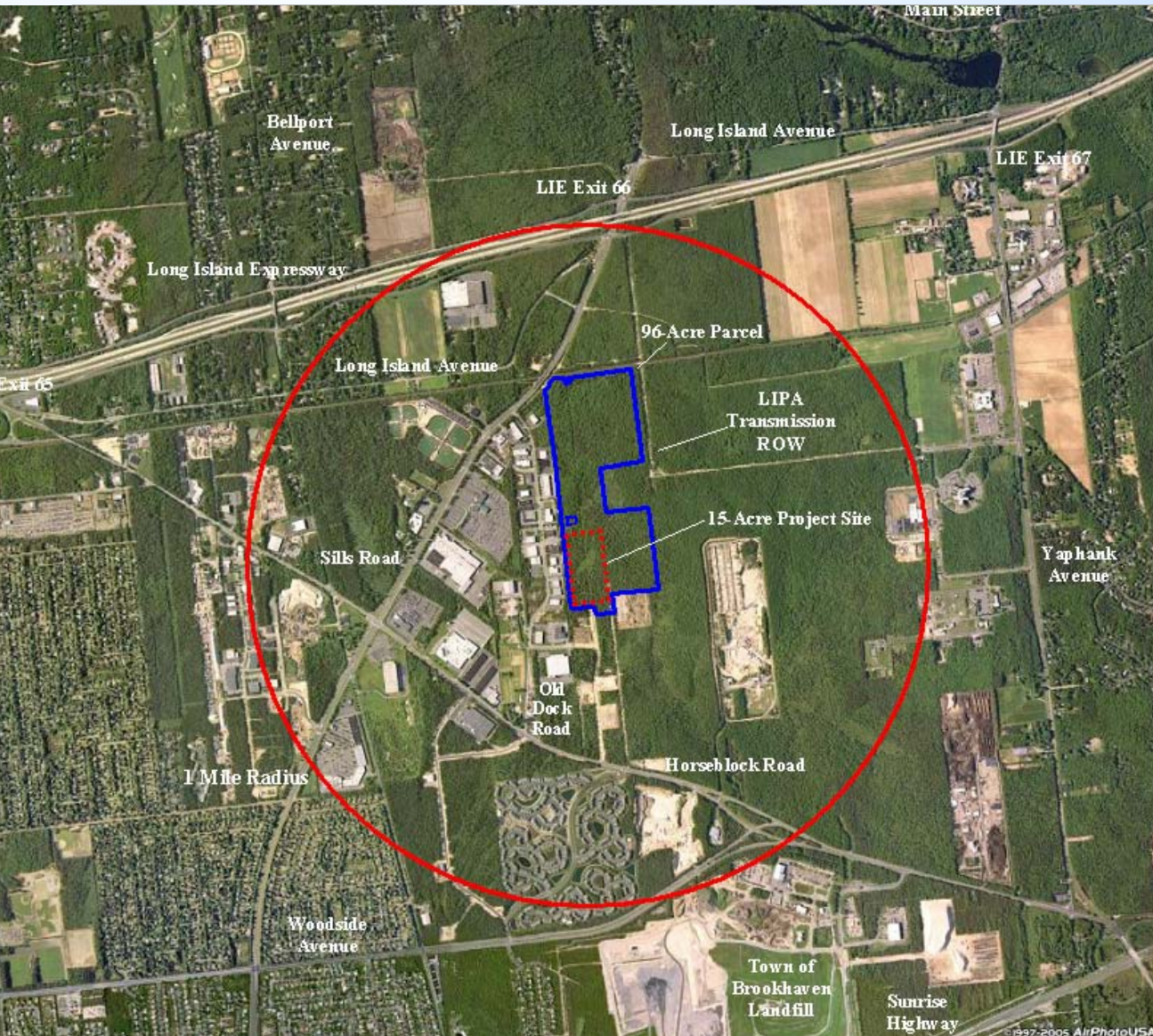
*Bird's-eye view
Computer generated simulation*

Site location



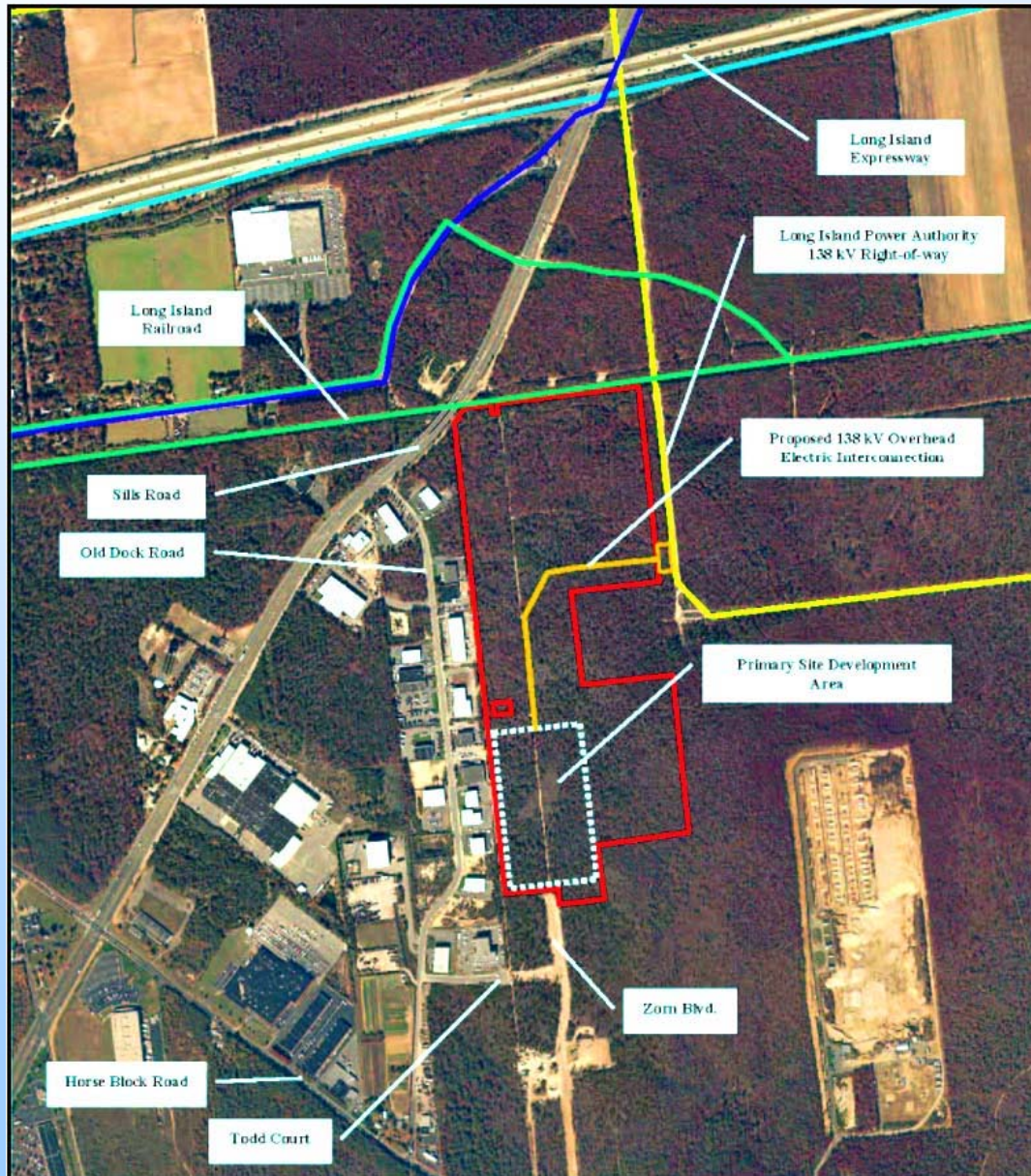
- 96 acres, zoned L-1 industrial
- Centrally-located in large industrial area
- Adjacent land:
 - North—LIRR, industrial
 - West—commercial facilities
 - South—subdivided industrial plots
 - East—LIPA transmission & undeveloped industrial
- Plant footprint: 15 acres

Environmental characteristics



- Large buffer to residential areas
- Not in deep water recharge zone
- No wetlands
- Not near parks or rivers
- No threatened or endangered species
- Not in any other environmentally sensitive area
- Complies w/ NYS & Brookhaven noise standards

Interconnections



- *Electric*

- 138KV double-circuit line runs along eastern border of property
- 326 MW will be connected to adjacent 138 KV line

- *Gas*

- Major KeySpan pipeline is ~4000 ft from site
- (If constructed) Islander East terminus is <1/2 mile from site
- Alternative options under evaluation

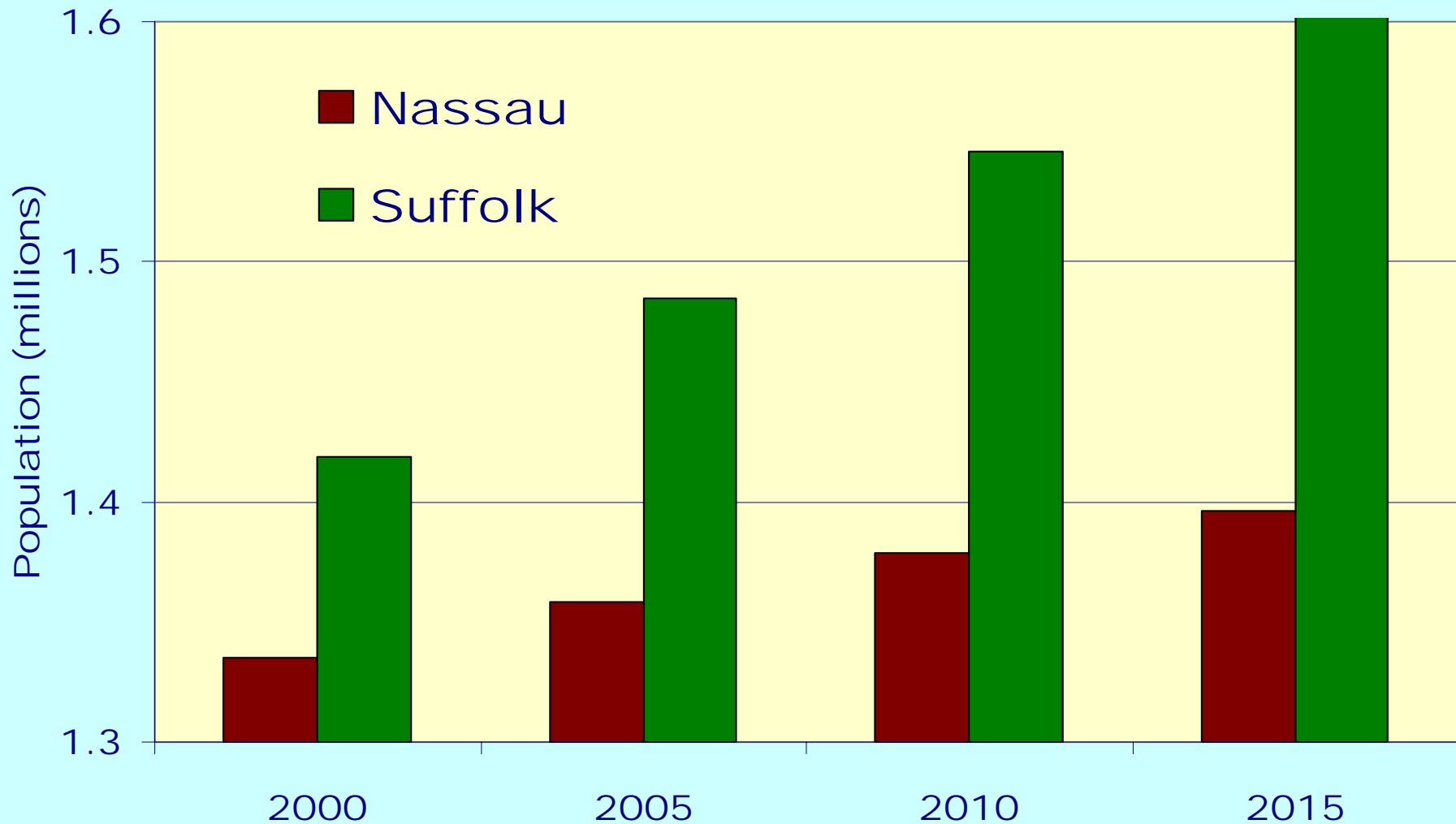
Brookhaven Empire Zone

- Economic development requires added electric power for new industrial & commercial facilities
- Site occupies 3% of Empire Zone
- Full property tax paid
- Refunds from NYS go to LIPA to lower rates



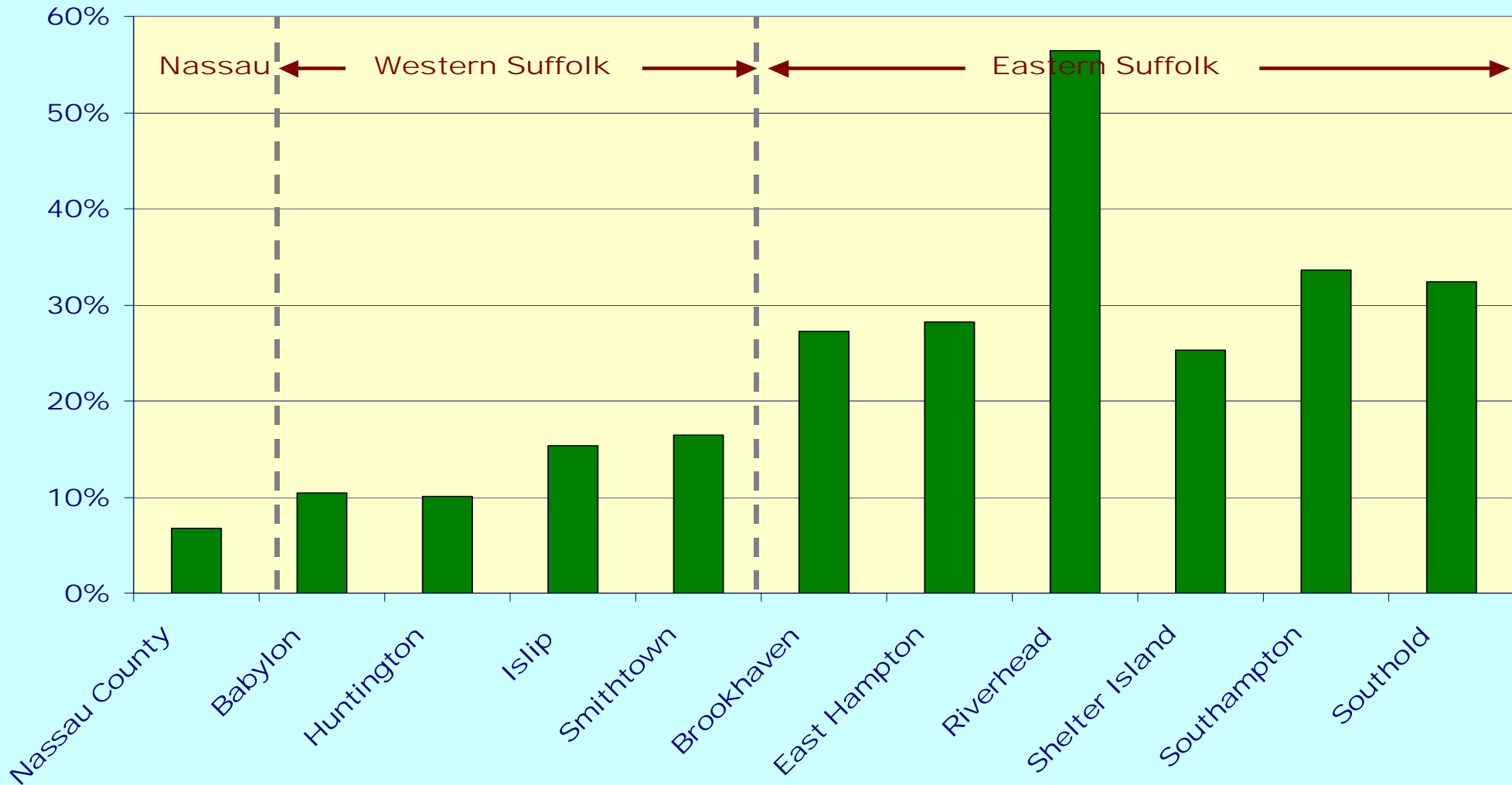
LI continues to grow

Population growth--Nassau and Suffolk



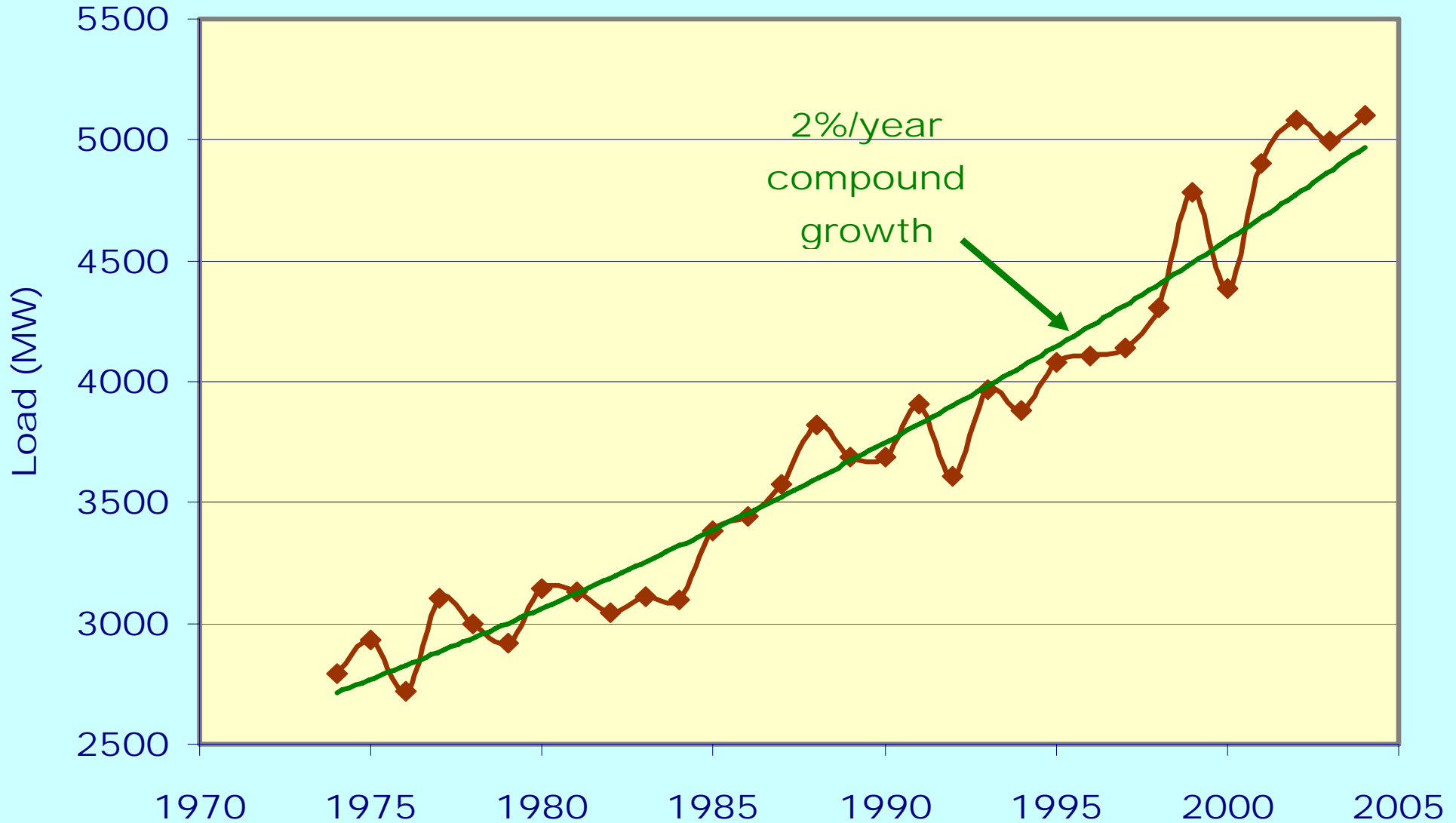
Highest growth in Eastern Suffolk

Population growth 2000-2025 by region



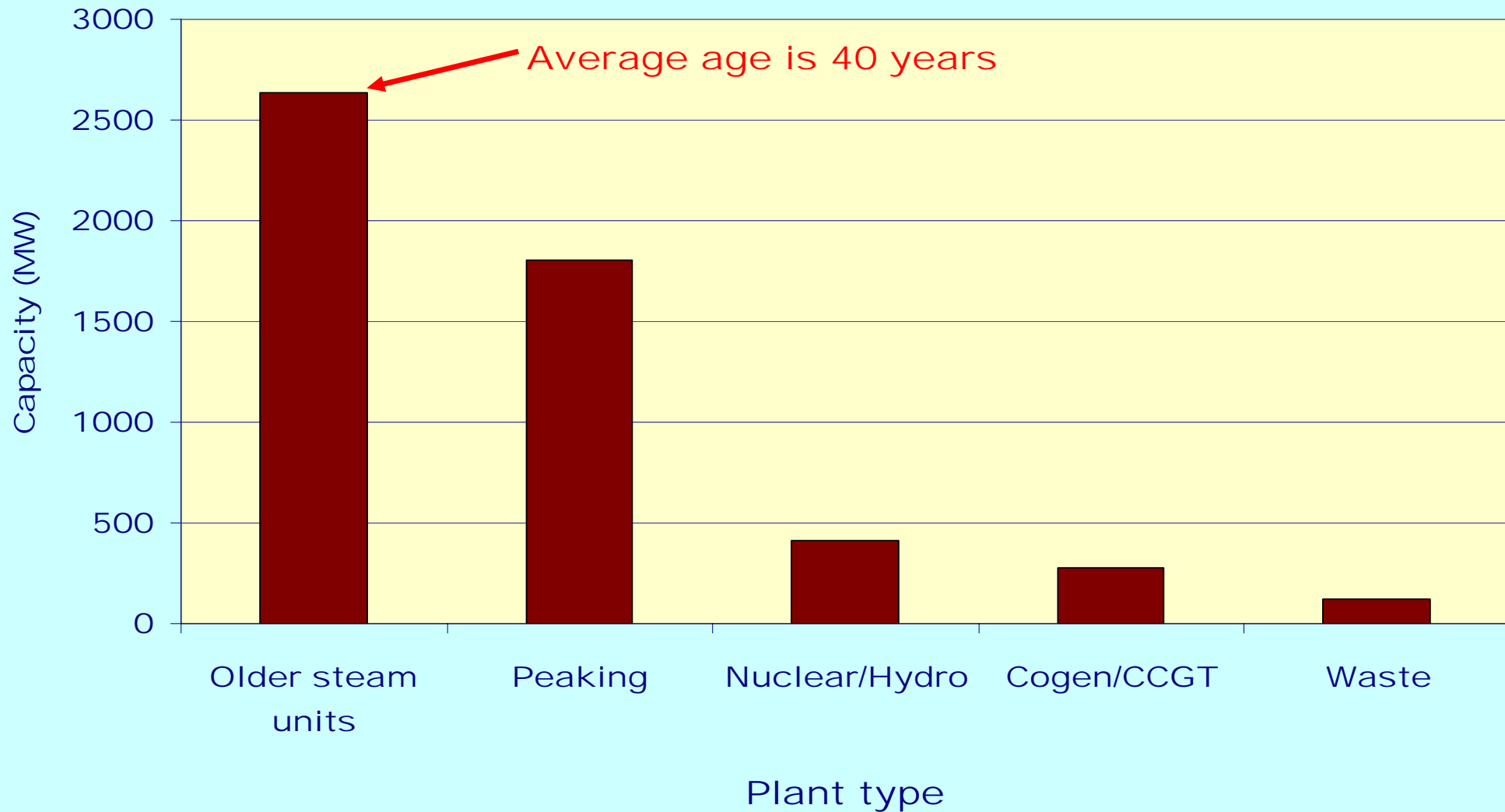
Economic growth = load growth

LIPA load growth (5-yr rolling average)

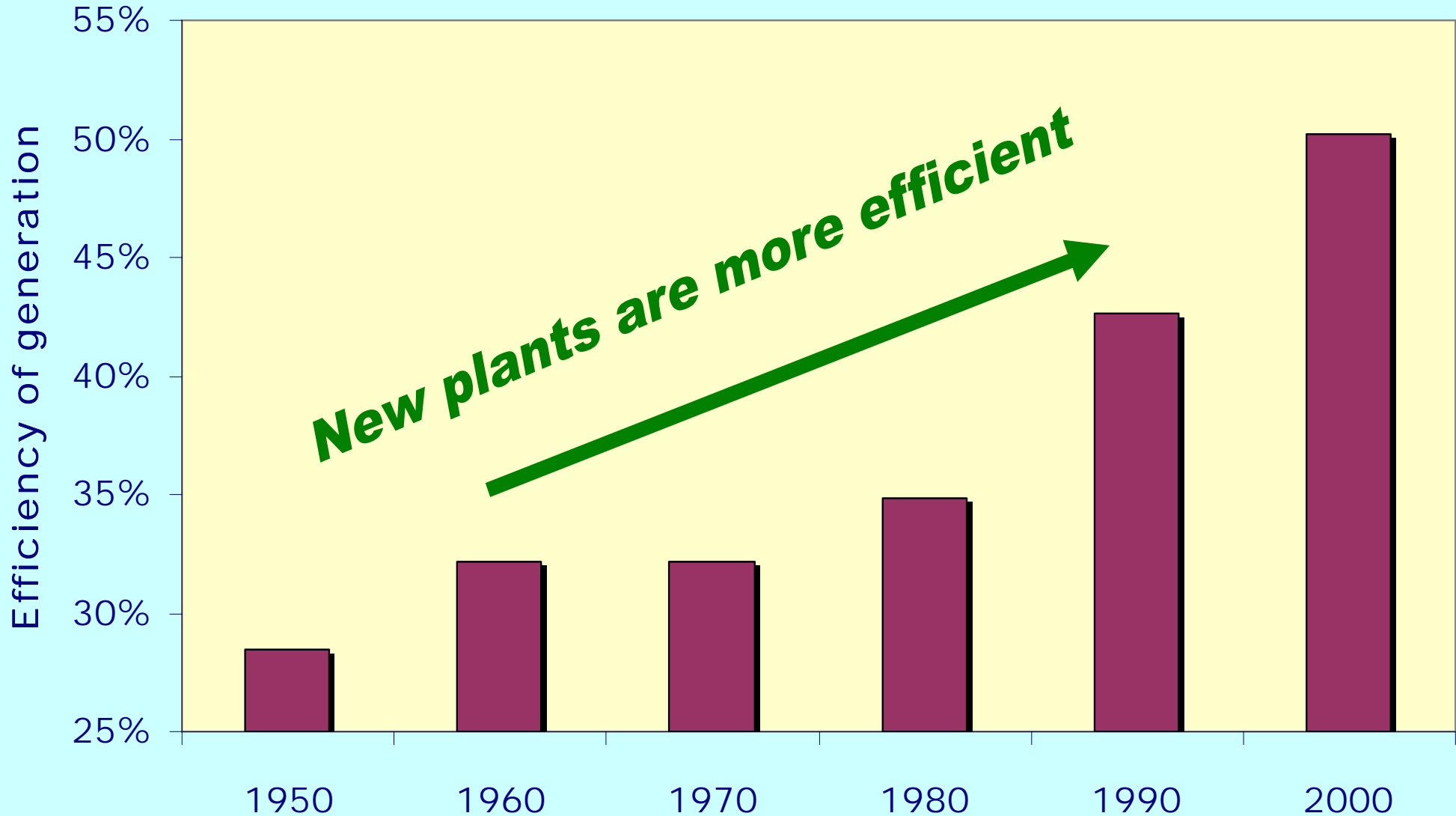


Old plants need to be replaced

LIPA's mix of generating resources

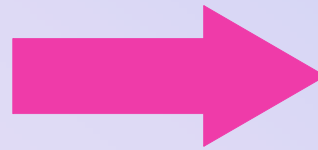


New plants use much less fuel

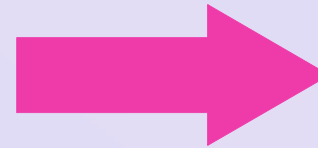


Efficiency means lower costs

Older steam units



New combined-cycle plant

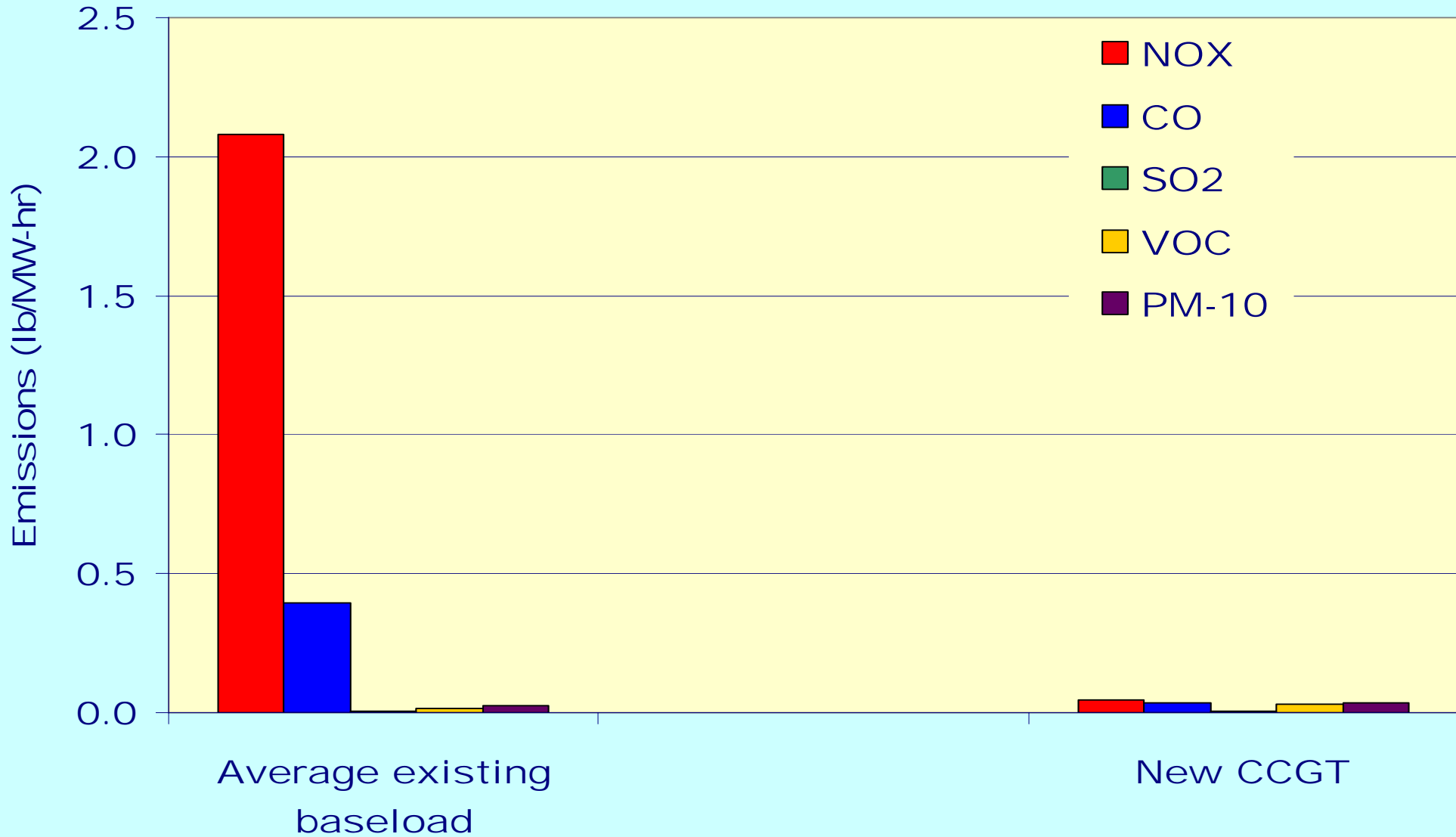


- Fuel savings at today's gas prices: 4 ¢/kwh
- For 300 MW plant: \$100 million/year

New plants are much cleaner

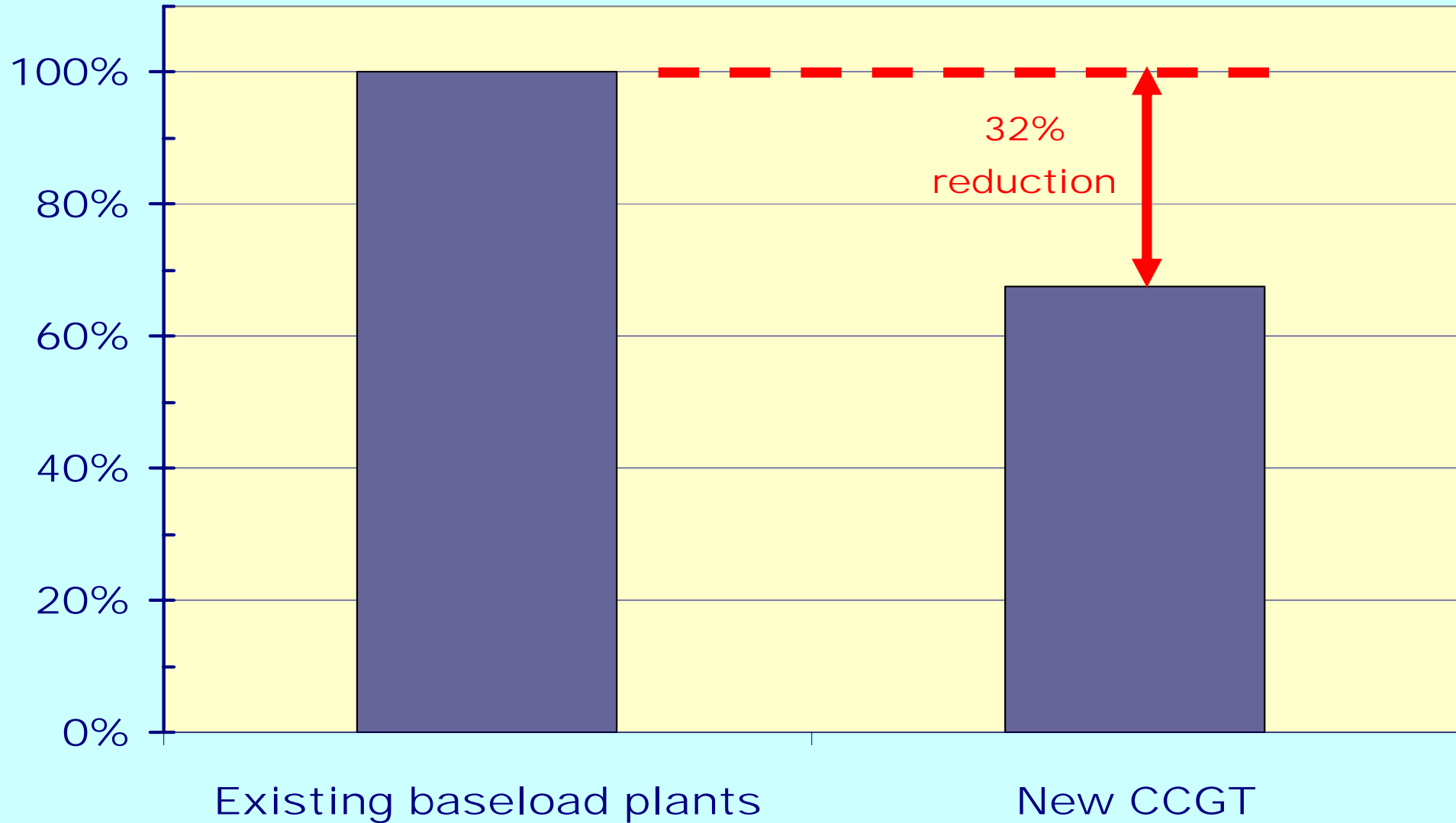
Emissions--existing baseload vs new CCGT

Fired on natural gas



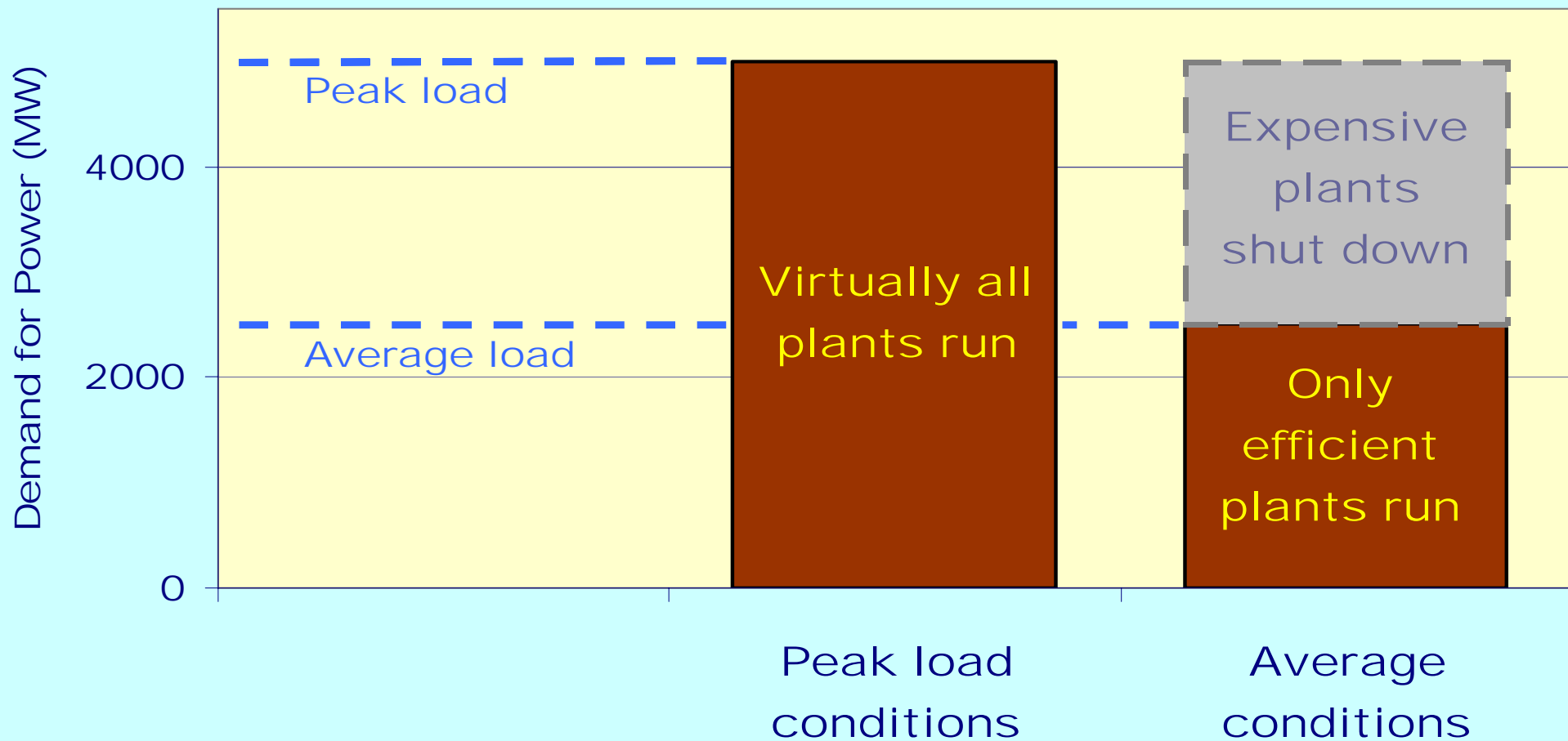
Greenhouse gases are reduced

Carbon dioxide emissions



New plants displace old

Market rules mean that efficient plants are dispatched before inefficient ones



Effect of adding new efficient plant

- NY Independent System Operator determines which plants are selected to run based on operating costs.
- New, efficient plants have lower operating costs and so a new plant will be selected to operate in preference to older plants
- Older plants will be used much less (only when demand for power is high)
- Since newer plants are cleaner, overall air emissions are reduced
- The benefits of cleaner air are achieved whether or not older plants are actually retired

Water consumption

- Air-cooled condenser
 - Reduces water consumption by >90% compared to evaporative cooling
- Recycling of process waste stream
 - Further reduces need for potable water
- Overall effect:
 - Water consumption reduced by 94%
- SCWA will supply water

LIPA selection of project

- Jun 03—LIPA issues RFP
- Sep 03—14 responses submitted
- Sep 03-May 04—LIPA evaluation of responses
 - Economics
 - Environmental
 - Community acceptability
 - Wholesale market competition
 - Diversity of supply
 - Dual fuel capability
 - Gas/electric interconnects
- May 04—LIPA selects Caithness Long Island
 - First major on-Island baseload capacity to be added in three decades

What CLIEC offers LI

- Generation capacity to meet increasing demand for power by a growing LI economy
- First step in the turn-over of our aging baseload power infrastructure
- New generation of power generation technology
 - Much more efficient
 - Much cleaner
 - More reliable
- Jobs
 - Substantial construction employment
- Pumps money into local economy

CLIEC—local economic benefits

Construction

- Labor
- Locally purchased materials & services

Operations (over project life)

- Property taxes
- Payroll and local purchases

Total local economic impact over project life:

- Over \$300 mil, not including multiplier effects
- Approximately \$600 mil, with multiplier effects

Impact on immediate area

- 20-25 operating employees
 - Minimal traffic impact
- Minimal noise impact
 - Inside nearby buildings, sound due to plant will be equivalent to that of quiet office
- Relatively low demand for water
- Improved electric & gas infrastructure
- Substantial property tax payments