

Draft

NY City Steam Exemption

Steam Exemption Specifics
Peripheral Issues

3/16/05 BIC
Agenda #7

NYC Steam Exemption

- Units supplying the New York City steam distribution system are granted an exemption from penalties due to their PURPA-like operating characteristics.
 - Electricity output level is driven by NYC steam load.
 - Steam supply and reserve requirement is a utility service regulated by the NY PSC.

NYC Steam Exemption

- The tariff was written when the total capacity of units supplying the city steam utility was 365 MW; this MW level is identified in the tariff language as the number of exempted MW.

NYC Steam Exemption

- Consolidated Edison is in the process of replacing its old steam supply generators with cleaner and more efficient units. (Commercial operation to commence May 1)
 - The total electric output capacity of the new configuration, after retirements and replacements, is 499 MW, all of which have the same operating characteristics that justified the original exemption.
 - Steam output capacity has remained constant.

Background

- Section 3 of the Services Tariff allows (category 2) steam co-generators producing electric energy resulting from the supply of steam to the district steam system in NYC to be exempt from persistent under-generation charges.
- Steam co-generation units are dispatched for steam loads with electric generation produced as a by-product and are not able to follow exact electric schedules.
- The Steam system is a regulated utility.
- The current exemption was set at 365 MWs, corresponding to the then-existing units.

<u>Units</u>	<u>MWs</u>
East River 6	135
Waterside (WS)	165
Hudson Ave unit 10 (HA 10)	65
Total	365

Replacement Unit

A new unit - East River Repowering Project (ERRP)*- was built to replace the steam capacity of Waterside** and Hudson Avenue 10.***

<u>Units</u>	<u>Summer-MW</u> s	<u>Winter-MW</u> s
East River 6	135	135
<u>ERRP (2 units)</u>	<u>288</u>	<u>364</u>
Total	423	499

* Approved by Operating Committee on 12/11/00

** Retired when ERRP became available to the steam system

*** Retired in 2004

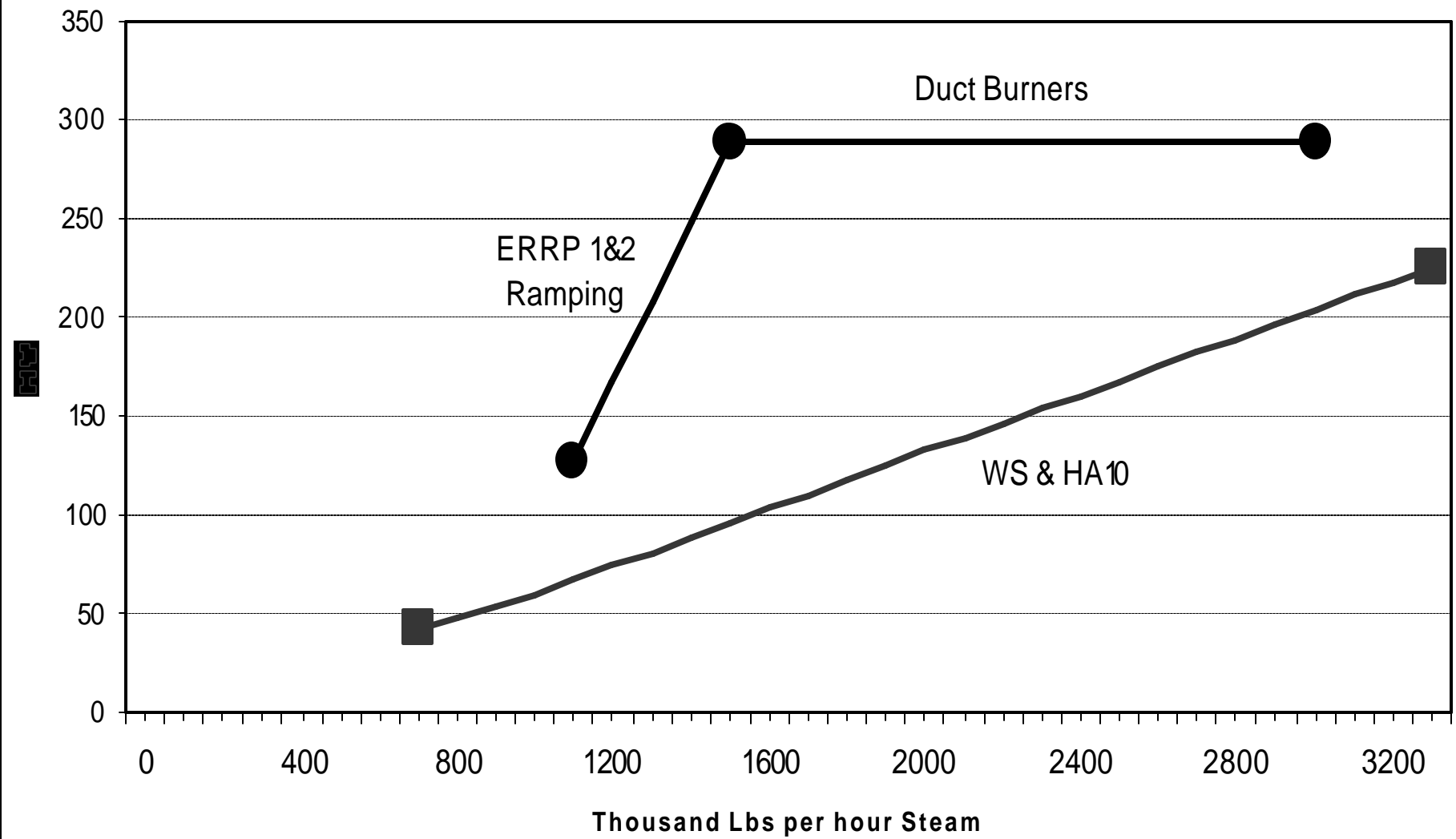
Relationship Between Steam and Electric Outputs

- The steam output of ERRP matches that of the retiring WS and HA10 units.
- The electric output of the new ERRP is greater than that of WS and HA10 (1920s vintage), due to improved technology.

Enhanced Ability to Follow Schedules

- ERRP will have a better ability to follow a fixed electric schedule than WS and HA10. (See Graph)
- WS & HA10 electric generation is a function of steam output, which is not known ahead of time.
- ERRP electric generation is also a function of steam output, but only within a narrow range of steam production levels, from 1,100,000 to 1,500,000 lb/hr.
 - This corresponds with the short time interval that the gas turbine moves from minimum electric to maximum electric.
- At full electric generation, ERRP units use duct burners to supply the additional steam keeping the electric production fixed.

Performance of ERRP vs. WS & HA10



Proposal to Increase the Category 2 Allowance

- ERRP serves the same steam system as the retiring units, causing a corresponding electric output increase from 365 to 499 MW.
- The same steam capacity now produces up to 134 of additional MW, but with the same operating characteristics that justified the original exemption.
- The operating characteristics of the replacement units will result in fewer conditions in which electric output is volatile (therefore improving electric system operation), but will not eliminate the need for exemption for those periods of continued volatility.

NYC Steam Exemption

- Maintaining and allocating the 365 MW exemption among three units with 499 MW of increased actual capacity would require a significant software modification effort.
- The NYISO recommends a tariff change to raise the exempted amount of steam capacity to the 499 MW level, or in the alternative, a generic limit such as “the actual capacity of units engaged in supplying NY City’s steam utility.”

Peripheral Issues

- This kind of change should be made in conjunction with other related potential changes.
 - Agreed.
 - The ISO has begun a broader examination of potential enhancements and rules adjustments.
 - Some are straight forward; others complex.
 - Some are already scheduled; others are not.

Peripheral Issues

- The issues include but are not limited to such items as:
 - Start-up/shut-down penalties
 - 15-Minute scheduling issues
 - Wind expansion and management
 - General review of the adequacy of the dispatch rules, penalties, and compensation.

Peripheral Issues

- We will bring the issues and our proposals forward as we develop them for consultation with MPs in approximately the order shown.
 - Start-up/shut-down penalties
 - 15-Minute scheduling issues
 - Wind expansion and management
 - General review of the adequacy of the dispatch rules, penalties, and compensation.

Conclusion

- The NYC steam exemption limit is not a complex issue.
- The requested increase in the exemption benefits overall operation and avoids the need for a disproportionate IT effort.
- The ISO recommends that BIC act as proposed in the motion.