

Proposed Changes to Con Edison Black Start Plan

Kathy Whitaker

*Manager, Auxiliary Market Operations
New York Independent System Operator*

Management Committee Meeting

July 25, 2012

Background

- ◆ **The NYCA Black Start and System Restoration plan comprises the NYISO plan and local TO plans**
 - *NYISO plan is to energize the 345-KV transmission backbone from Black Start Facilities*
 - *Con Edison plan to restore its local area is specified in Rate Schedule 5 of the MST*
- ◆ **Changes are proposed for the local Con Edison program**

Need for Changes

- ◆ **Con Edison's Black Start Plan has been in place since 2005, with few changes**
- ◆ **Discussions with Con Edison and existing providers indicated a need for updates and improvements**
- ◆ **The NYISO collected input, reviewed other black start programs, reviewed reliability standards and hired a compensation consultant**

Proposed Changes

- ◆ **Test Procedures**
- ◆ **Test Scheduling**
- ◆ **Commitment Period**
- ◆ **Program Participation**
- ◆ **Compensation**

Proposed Changes

- ◆ **The changes are proposed to apply to existing providers and new providers, including newly retrofitted units, in Con Edison's Black Start Plan**
 - *If existing providers give notice within 30 days of the effective date of new tariff provisions, they may remain under the existing tariff provisions until their next opportunity to withdraw under the existing tariff provisions*

Proposed Test Procedure Changes

- ◆ **30 days to remedy a failed test**
- ◆ **After each test, the Generator Owner will review performance and, if appropriate, develop a mitigation plan to address deficiencies identified**

Proposed Test Procedure Changes (cont'd)

- ◆ **Gas turbine testing revised to remove the requirement to start a second unit if the gas turbine is a stand-alone black start resource**
- ◆ **Combined cycle testing requirements added to the tariff**

Proposed Test Procedure Changes (cont'd)

◆ Steam Unit Testing Changes

- *Comprehensive test demonstrating synchronization to the transmission system required every three years*
 - Can be performed if the unit is hot from current operations or when it becomes hot on the way up from a cold start
- *No interim milestone times are required*

Proposed Test Procedure Changes (cont'd)

◆ Steam Unit Testing Changes

- *Intervening years test performed during years when the comprehensive test is not performed*
 - Requires energizing the steam unit's internal light and power bus and adding auxiliary loads that would be required to fire the boiler
 - Does not require fire in the boiler or synchronization to the transmission system

Proposed Test Procedure Changes (cont'd)

- ◆ **Steam Unit Testing Changes**
 - *Comprehensive test must have been completed successfully within the prior two years in order to qualify for an intervening years test*

Proposed Test Schedule Changes

- ◆ **Extend the black start testing period**
 - *May through April, except no tests in June, July and August*
- ◆ **As currently required, test dates must be agreed upon by the Generator Owner, Con Edison and NYISO**
 - *Test witnesses are not required, but Con Edison and NYISO may have them present*

Proposed Commitment Period Changes

- ◆ **Increase notification of withdrawal from one year to two years**
 - *Withdrawal from capacity and energy markets results in withdrawal from black start program, without regard for black start notification*

Proposed Commitment Period Changes (cont'd)

- ◆ **If a generator with an existing commitment to the black start program is mothballed and returns to service within three years, the generator will remain in the black start program for the remainder of its outstanding three-year commitment**
- ◆ **Stagger commitment periods among black start units**

Proposed Program Participation

- ◆ **New or repowered units that Con Edison identifies as providing material benefit will be required to have black start capability and provide black start service**
 - *Con Edison study must be provided to developer and NYISO*
 - *Developer has the opportunity to demonstrate unsuitability of the site*

Proposed Compensation Changes

- ◆ **With its economic consultant, NERA, the NYISO identified ISO-NE's model to be an appropriate basis**
- ◆ **Two adjustments were applied for translating to Con Edison's Black Start Plan**
 - *Adjust capital investment by ratio of building like unit in NYC vs. Lower Hudson Valley (proxy for NE)*
 - *Adjust O&M costs by ratio of fixed O&M for like unit in NYC vs. Lower Hudson Valley (proxy for NE)*

Proposed Compensation Changes (cont'd)

- ◆ **Black start providers will be compensated based on the size of the unit providing black start service**
- ◆ **Units that share black start equipment will have one station level payment plus incremental payments for additional units**
- ◆ **Compensation will be determined by adding together the proxy costs for all units in a group and dividing by the number of units**

Proposed Compensation Changes (cont'd)

- ◆ **In addition to the proxy capital and O&M payments, black start providers can apply to the NYISO to recover demonstrated incremental CIP costs related to Black Start**
- ◆ **A generator required to provide black start service may file for a unit-specific cost-based rate at FERC if proxy costs are non-compensatory**

Proposed Black Start Capital Payments

Black Start Resource Type (Fossil Plants)	Station-level Blackstart Capital Payment (\$/year for the first unit)	Additional Resource Blackstart Capital Payment (\$/year for each additional unit)
MVA \leq 10	\$21,770	\$10,880
10 < MVA \leq 60	\$214,570	\$10,880
60 < MVA \leq 90	\$248,460	\$10,880
90 < MVA \leq 300, Small Starting Requirement	\$414,980	\$10,880
90 < MVA \leq 300, Medium Starting Requirement	\$957,920	\$10,880
90 < MVA \leq 300, Large Starting Requirement	\$1,785,080	\$10,880
300 < MVA Large Starting Requirement	\$1,833,750	\$32,650

Note: These are 2011 dollars. All payments would be adjusted by Handy Whitman Index on January 1 every year.

Proposed Black Start O&M Payments

Black Start Resource Type (Fossil plants)	Station-level Blackstart O&M Payment (\$/year for the first unit)	Additional Resource Blackstart O&M Payment (\$/year for each additional unit)
MVA \leq 10	\$22,335	\$6,040
10 < MVA \leq 60	\$42,295	\$8,200
60 < MVA \leq 90	\$49,850	\$10,140
90 < MVA \leq 300, Small Starting Requirement	\$118,255	\$33,665
90 < MVA \leq 300, Medium Starting Requirement	\$252,265	\$65,600
90 < MVA \leq 300, Large Starting Requirement	\$388,865	\$65,820
300 < MVA Large Starting Requirement	\$414,540	\$77,685

Note: These are 2011 dollars. All payments will be adjusted by Handy Whitman Index on January 1 every year.

Other Proposed Changes

- ◆ **Incorporate the black start and system restoration provisions from Rate Schedule 6 of the OATT into Rate Schedule 5 of the Services Tariff to ensure consistency and avoid errors**
 - *Replace Rate Schedule 6 of the OATT with a cross-reference to Rate Schedule 5 of the Services Tariff*
- ◆ **Make general, non-substantive drafting improvements, e.g., ensuring the consistent use of defined terms**

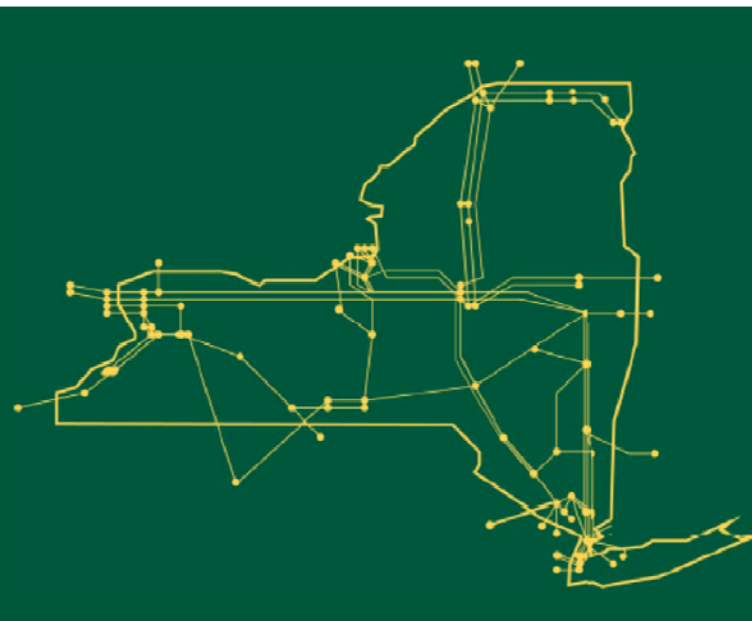
Data Needed

- ◆ **The NYISO and Con Edison need data from existing black start providers concerning black start capability and site configuration**
 - *Determine which existing units are part of the black start program*
 - *Calculate compensation*
- ◆ **The requirements to provide updated equipment data in Section 2.2 of the Reliability Analysis Data Manual apply to units that have black start capability**

Review Process

- ◆ **Four Black Start Task Force Meetings**
- ◆ **Two Joint BIC and OC Meetings**
 - *Review May 16*
 - *Approval June 20*
- ◆ **Ongoing Review of Steam Unit Testing Requirements with NYSRC**

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



www.nyiso.com