



Results of DPUC Capacity RFP

Connecticut Department of Public Utility Control

April 23, 2007



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Competitive solicitation results in selection of three generation projects and one energy efficiency project

- Selected portfolio is expected to produce \$500 million of net benefits for Connecticut ratepayers over next 15 years by reducing Federally Mandated Congestion Costs (energy, capacity, locational forward reserves)
- Winning portfolio also has many expected non-economic benefits:
 - Improves reliability and is expected to alleviate impact of power outages during gas supply shortages
 - Reduces emissions of major pollutants (CO₂, SO₂, and NO_x) by more than 1 billion tons over next 15 years
 - Re-uses existing sites and infrastructure
 - Increases number of market participants

Winning portfolio totals 787 MW:

- Kleen Energy – 620 MW CCGT in Middletown
- Waterside Power – 66 MW oil-fired peaker in Stamford
- Waterbury Power – 96 MW gas-fired peaker in Waterbury
- Ameresco – 5 MW state wide energy efficiency project



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Objectives of RFP

- Main objective is to reduce electricity rates as much as possible by building new generation and cutting demand
- Acquiring a portfolio of different projects in order to maximize benefits at least cost for Connecticut ratepayers
 - Different technologies (baseload generation, peaking generation, demand response, energy efficiency) have different impacts on wholesale electricity markets (energy, capacity, reserves)
 - Baseload generation projects take time to come on-line; peaking units and demand side projects can be implemented more quickly
- Focus was on selecting projects that maximized value after factoring in their contract costs – “net benefits” were key component of analysis



RFP launched in response to EIA – in process for more than 1 year

June 2005 through April 2007 timeframe

6/2005:
EIA effective

12/2005:
Phase 1 of EIA
implemented
by DPUC

6/5/2006:
DPUC issues
first draft of
Phase 2
Investment
Needs (IN)
paper

9/15/2006:
DPUC issues
RFP
And revised
IN paper

9/29/2006:
Bidder
Registration
Deadline

11/13/2006:
Qualification
submissions due

10/10/2006:
Pre-Bid Conference

11/16/2006:
DPUC issues
final contract
templates

12/13/2006:
Financial Bids
due

4/23/2007:
Winning bids
announced



Investment Needs Assessment revealed a range of capacity needs

- Needs assessment focused on supply shortfalls given demand in three ISO-NE markets that drive congestion costs – energy, capacity (FCM), and locational forward reserves (LFRM)
 - Quantity-based analysis looked at differences between forecasted supply and demand over 2007-2021 time horizon
 - Four scenarios analyzed representing different possible market conditions
 - Investment Need defined as Capacity Shortfall against Connecticut’s Local Sourcing Requirement and Locational Forward Reserve Requirement
 - Conditions in LFRM created near term need for the state (with a capacity shortfall of 629 MW), while overall supply-demand conditions in Connecticut and FCM Market Rules drove long term needs (up to 1,692 MW by 2021)

➤ **Needs Assessment was not a target for procurement – but a range of possible capacity needs. Procurement decision needs to be made in light of bid prices received and estimated market benefits.**



Innovative RFP and contract used to meet specific CT needs

➤ **All source RFP allowed for direct competition among various resources**

- Competition attracted the best alternatives for consideration
- Projects had to be located in CT
- Projects had to offer new or incremental capacity
- Contract template allowed for different resources to compete on equal footing

➤ **Contract For Difference (CFD) structure provided for benefit maximization at least cost**

- Maximized benefits for ratepayers by requiring that winning bidders participate in ISO-NE markets – multiplier effect obtained by reducing market-wide prices
- CFD settlement process reduces direct contract payments to suppliers from electric distribution companies (EDCs)
- Reduced risk for EDCs serving as counterparties and elimination of financial and accounting-related concerns

➤ **RFP was structured to ensure competitive process**

- Code of conduct strictly adhered to
- All bidders treated equally
- Bidders' identity hidden during bid evaluation process to ensure impartiality

➤ **As part of the Financial Bid, Bidders were invited to offer a Call Option as a hedge for ratepayers on high energy prices**



Level and quality of participation in RFP demonstrates competitive nature of process

RFP Phase	Number of project proposals
Bidder Registration	More than 80 project proposals submitted, representing about 8,000 MW
Qualification submissions	33 project proposals submitted qualification packages, representing about 6,000 MW
Financial Bid submissions	More than 25 individual projects submitted Financial Bids, representing about 4,500 MW
Conforming Financial Bids analyzed	22 conforming Financial Bid submissions analyzed

Extensive documentation required

Significant financial security deposit required

Many bids ranged within expected bounds of projected benefit streams

Note: capacity estimates include mutually exclusive projects.



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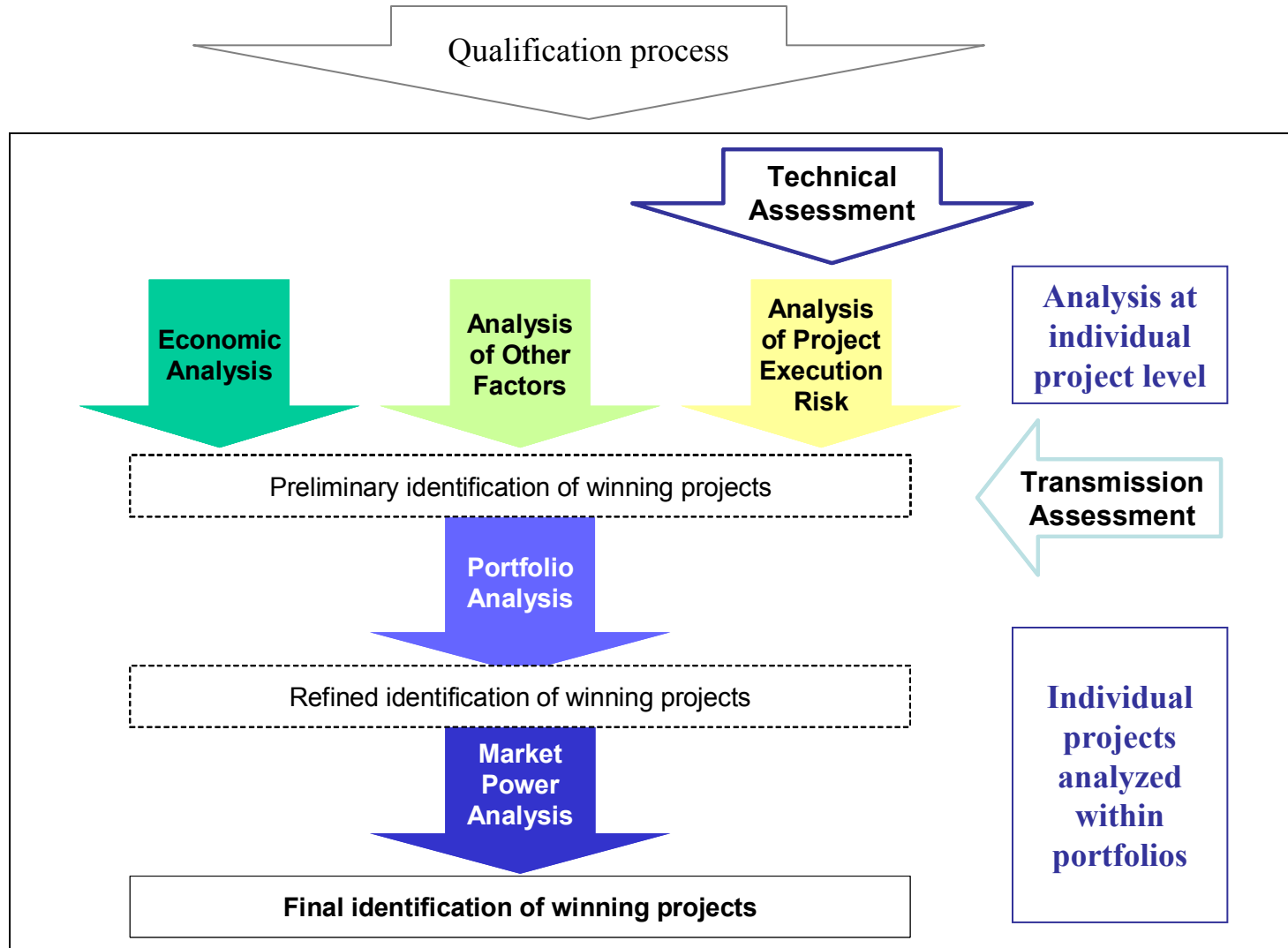


The objectives of bid evaluation process were driven by the EIA

1. To identify projects that **best meet the needs of Connecticut ratepayers** and the objectives of the EIA
 - Reducing total congestion costs (effectively decreasing FMCCs and wholesale power costs)
 - Improving reliability
 - Procuring projects at the lowest reasonable cost
2. To be able to analyze **different types of technology** (both supply and demand side, as required by EIA) on an equal footing
3. To ensure that bidders were **financially and technically capable** of developing, constructing, and operating the projects



The bid evaluation process entailed several steps shown in overview below



Detailed discussion of each phase follows



The Qualification process focused on assessing bidder technical and financial capabilities

- Bidder team had to demonstrate **project experience, technical expertise, and management ability** to successfully develop and operate the proposed project
 - Bid Team credentials analyzed
 - Technical specifications also assessed to ensure expected results were consistent with proposed technology
- Bidder team had to demonstrate that it was capable of **financially securing the project and the contract**
 - Financial wherewithal (cash flow, balance sheet strength) assessed in line with project size and complexity
 - Proposed project financing also assessed



Technical assessment was key aspect of the bid evaluation process

Technical Assessment:

- **Objective:** to identify any projects that are not technically feasible and to assess project execution risk, including possible delay to COD
- **Approach:** review of all Qualification and Financial Bid packages; additional technical questions submitted to bidders to address areas of concern; final evaluation based on broad set of technical criteria used for all projects

Transmission load flow analysis:

- **Objective:** to identify any potential problems related to deliverability and qualification for the FCM
- **Approach:** development of baseline transmission load flow case, based on latest ISO information; assessment of each project's likely deliverability in light of baseline and other ISO criteria; assessment of portfolio proposals from deliverability perspective



Economic Analysis examined the future benefits and costs of projects

EIA section 12(i) requires that winning contracts (1) result in the lowest reasonable cost of such products and services, (2) increase reliability, and (3) minimize federally mandated congestion charges to the state over the life of the contract”

Main components of FMCCS:



COST = Contract cost for a particular project based on RFP financial bid

BENEFIT = Changes in cost to CT load resulting in the selection of one project (Energy, Capacity, LFRM)

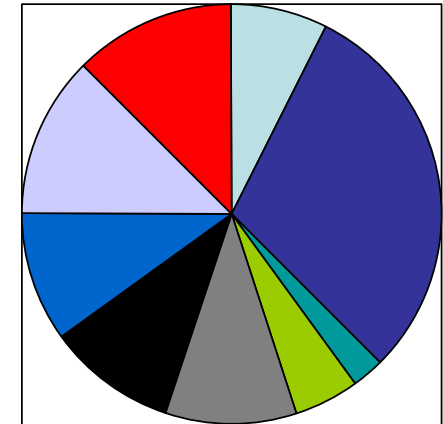
NET BENEFIT = (Aggregate Benefits minus Aggregate Costs) of a particular project on an NPV basis



All bids analyzed under nine scenarios to reflect different possible future market outcomes

- Scenario 1: Base supply demand, high fuel prices (7.5%)
- Scenario 2: Base case (30%)
- Scenario 3: Base case, delayed transmission (2.5%)
- Scenario 4: Base supply-demand, low fuel prices (5%)
- Scenario 5: Base demand, delayed new supply (10%)
- Scenario 6: Low demand, early new supply (10%)
- Scenario 7: Low demand, early new supply, low fuel price (10%)
- Scenario 8: High demand, delayed new supply, high fuel prices (12.5%)
- Scenario 9: High demand, delayed new supply (12.5%)

- Scenarios weighted to create “weighted average”
- Weightings developed based on likelihood and DPUC priority concerns (how to avoid high and volatile market prices)



■ SC-1 ■ SC-2 ■ SC-3 ■ SC-4 ■ SC-5
■ SC-6 ■ SC-7 ■ SC-8 ■ SC-9

Scenarios captured large range of values for key assumptions :

Gas prices ranged from \$3.60/MMBTu in low case in 2021 to \$23/MMBTu in high case

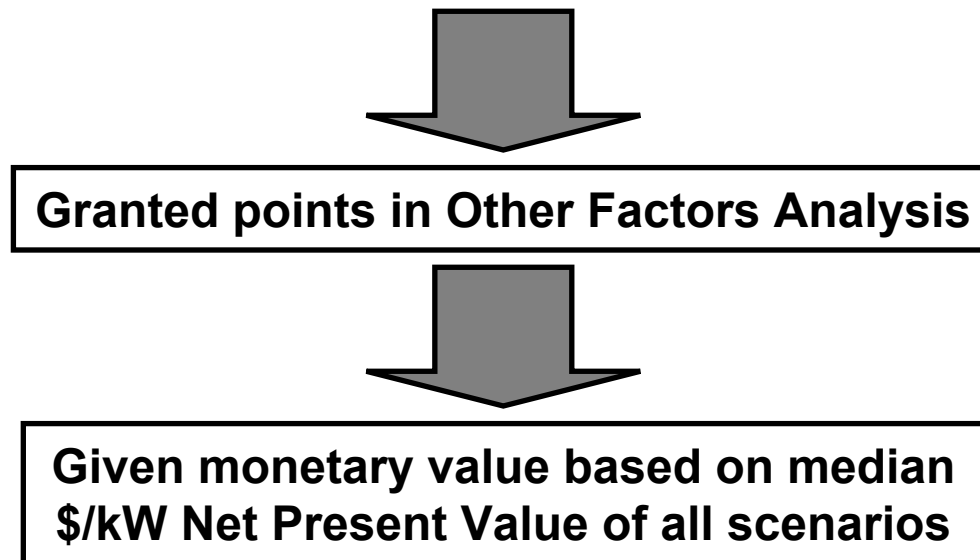
Entry of new supply varies by up to 6 years

Demand assumptions vary by as much as 2,480 MW in 2015



Connecticut policy priorities also incorporated into bid evaluation

- Targeted reduction environmental emissions (5%)
- Preference for use of existing infrastructure, brownfield sites (2.5%)
- Preference for fuel diversity (2.5%)
- Minimization of front loading of costs (2.5%)
- Other (improved reliability, reduction of RMR contracts, etc.) (2.5%)



Other Factor points and value integrated into Economic Analysis - worth 15% of total

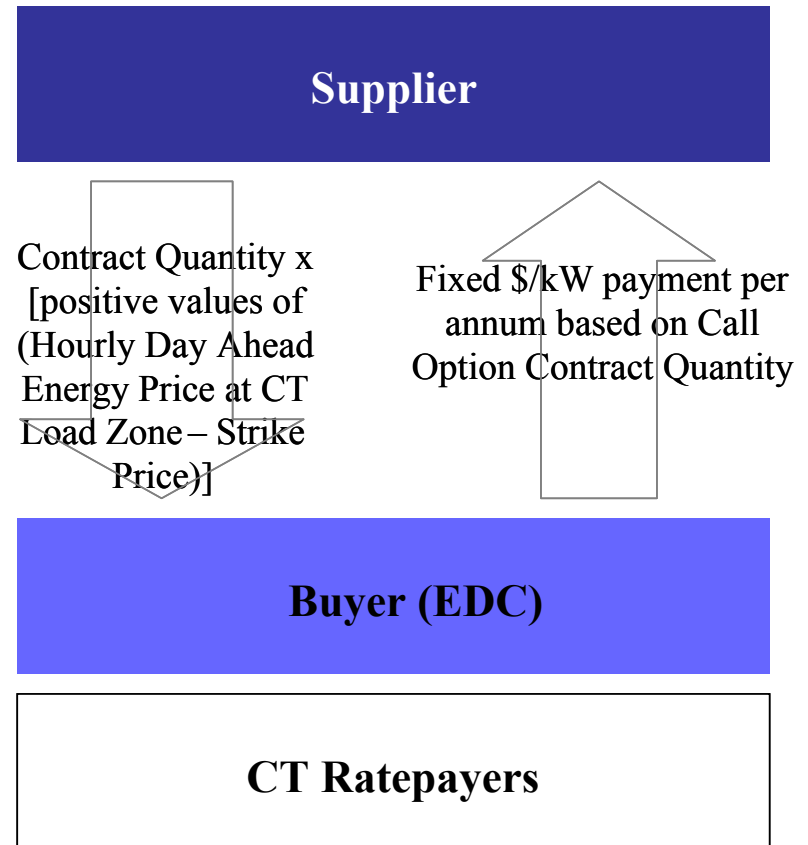


Bidders were invited to offer a Call Option to hedge against high energy prices

Objectives of Call Option

- Address concerns about volatile power prices
- Protect Connecticut ratepayers against peak power prices
- Create a mechanism within the legislatively authorized capacity contract to enable suppliers to provide this protection
- Ensure that EDCs are able to serve as counterparty to such a mechanism

How would the Call Option work?





Net value of call option added to net benefits of Economic Analysis in bid evaluation

How did we evaluate Call Option?

Adjusted Black-Scholes option pricing model

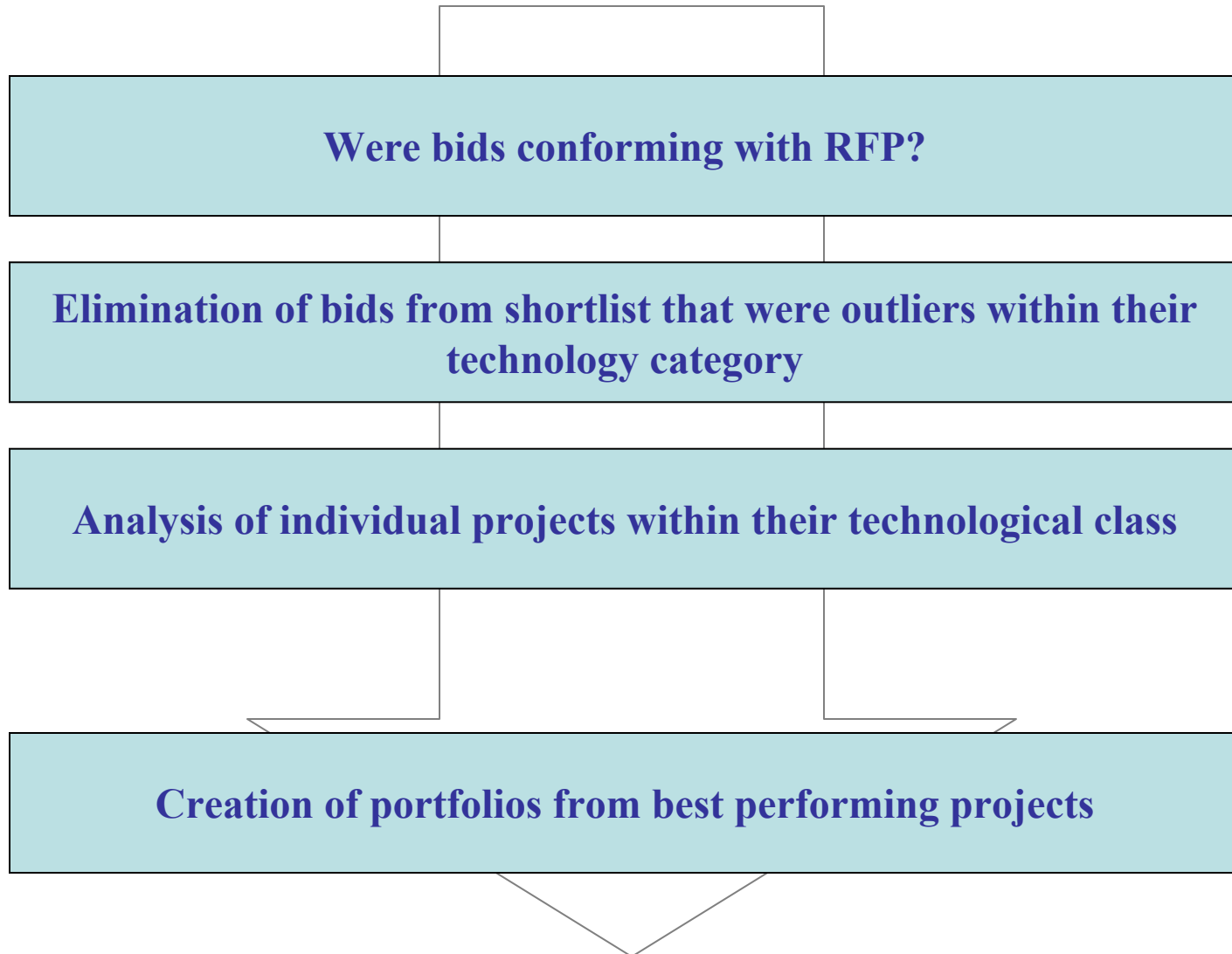
- Strike price provided by Bidder
- Energy price forecast developed in Economic Analysis (with specific project)
- Volatility estimates based on historical data, adjusted for future structural changes and mean reversion
- Call Option also analyzed under 9 scenarios – weighted average used in bid evaluation

How does Call Option fit into Bid Evaluation?

- Call Option analysis results in a net weighted average value for Call Option
- The net weighted average Call Option Value is added to the net benefits (on weighted average basis) from Economic Analysis as well as the value of Other Factors
- Total net benefits (including Economic Analysis, Option Value, and Other Factors) compared to determine winning projects and portfolios



The Economic Analysis also went through several phases





A portfolio of projects provides diversification and optimizes benefits across ISO-NE markets

Importance of portfolio analysis

- Different technologies affect ISO-NE markets differently
- Whole can be worth more than sum of parts if projects complement one another
- Certain technologies have a more symbiotic impact than others (i.e., CCGT enhances value of both EE and Peakers)
- Different projects come online in different timeframes – CCGTs take much longer to develop than peakers, demand side projects usually the fastest

Baseload (CCGT and Energy Efficiency)

- Energy benefits
- FCM benefits
- LFRM benefits (indirect)
- Improved reliability

Peaking plant

- FCM benefits
- LFRM benefits
- Energy benefits (marginal)
- Improved reliability

Demand response

- FCM benefits
- LFRM benefits (only if project qualifies according to ISO rules)
- Improved reliability



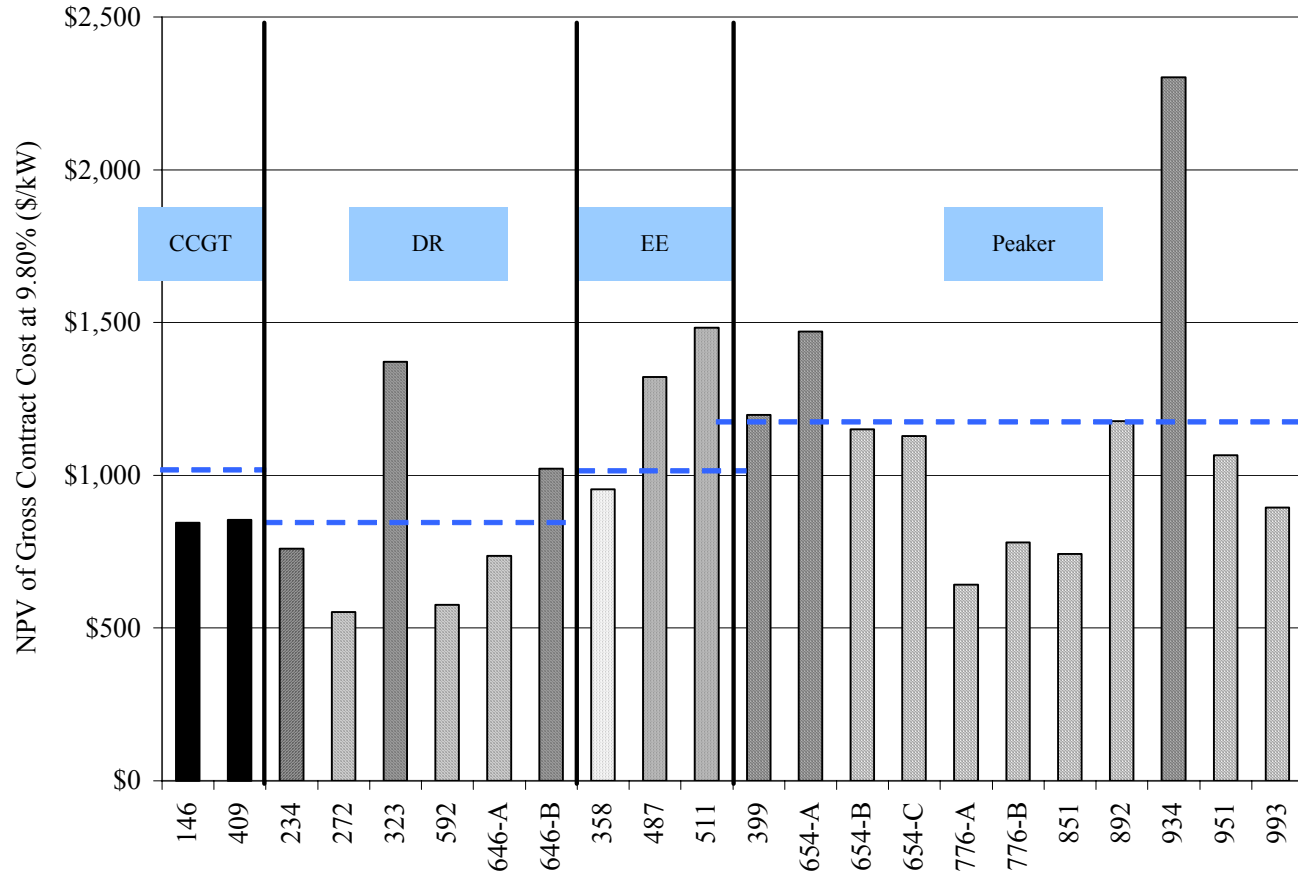
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To develop shortlist, projects compared within their technological class

Shortlisting process

- NPV of contract costs calculated
- Compared to:
 - Average NPV costs of technological class
 - Proxy used to determine when negative benefits result
 - Costs in other state programs

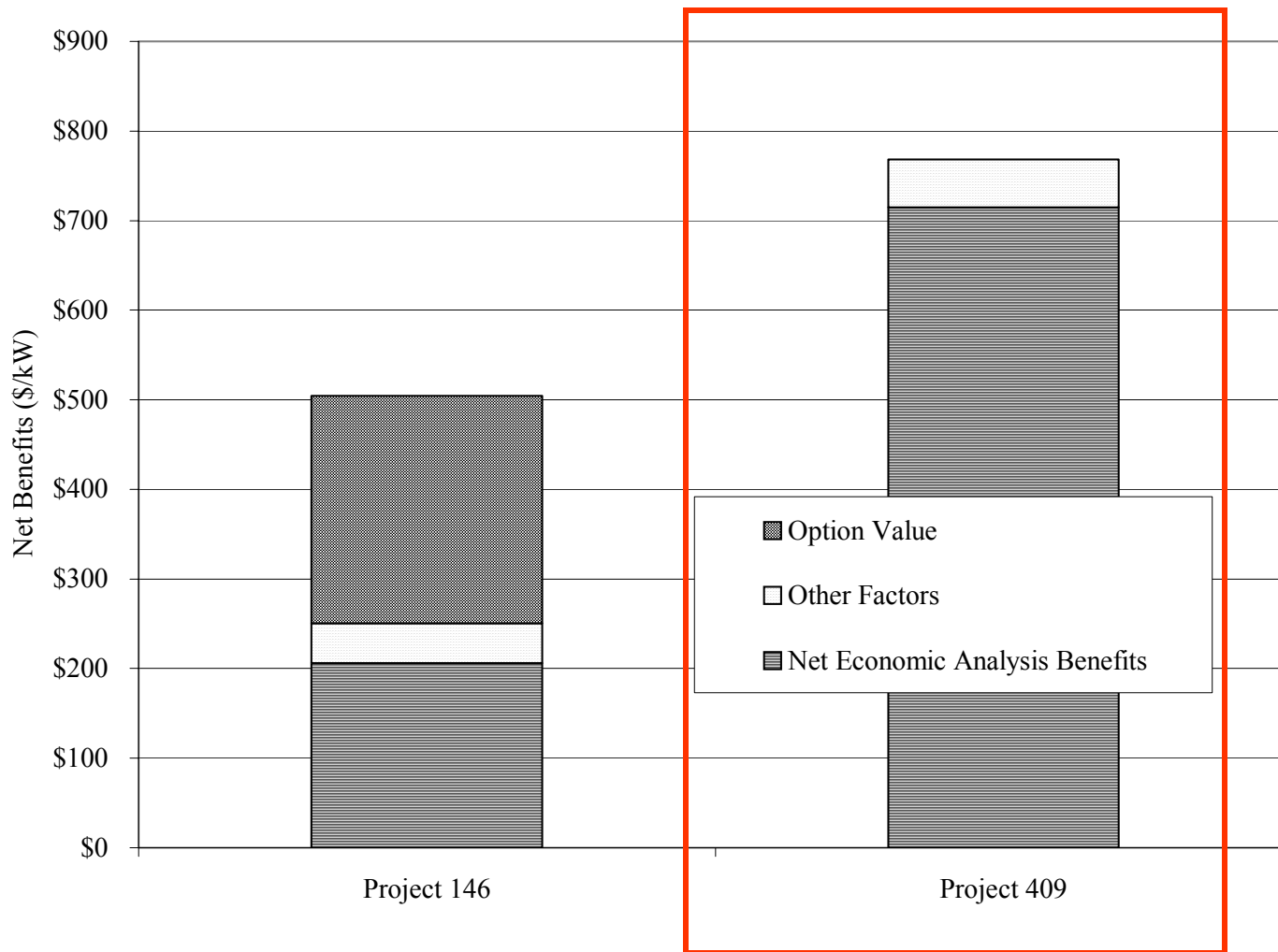


Highlighted projects eliminated from shortlist – 15 out of 22 shortlisted

Note: dotted line refers to point above which projects were not selected

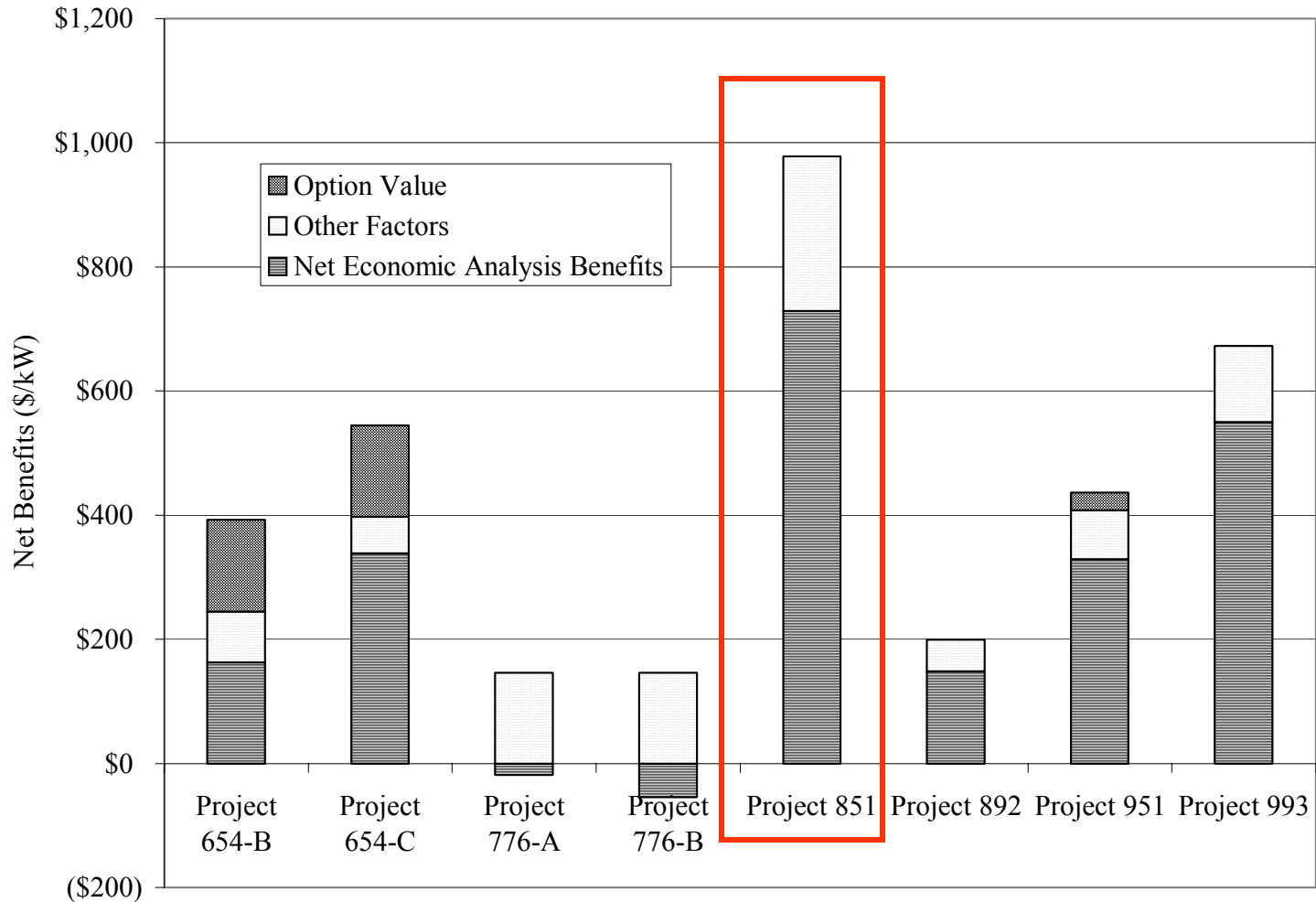


Of the two conforming bids for baseload combined cycle generation, Project 409 performed better



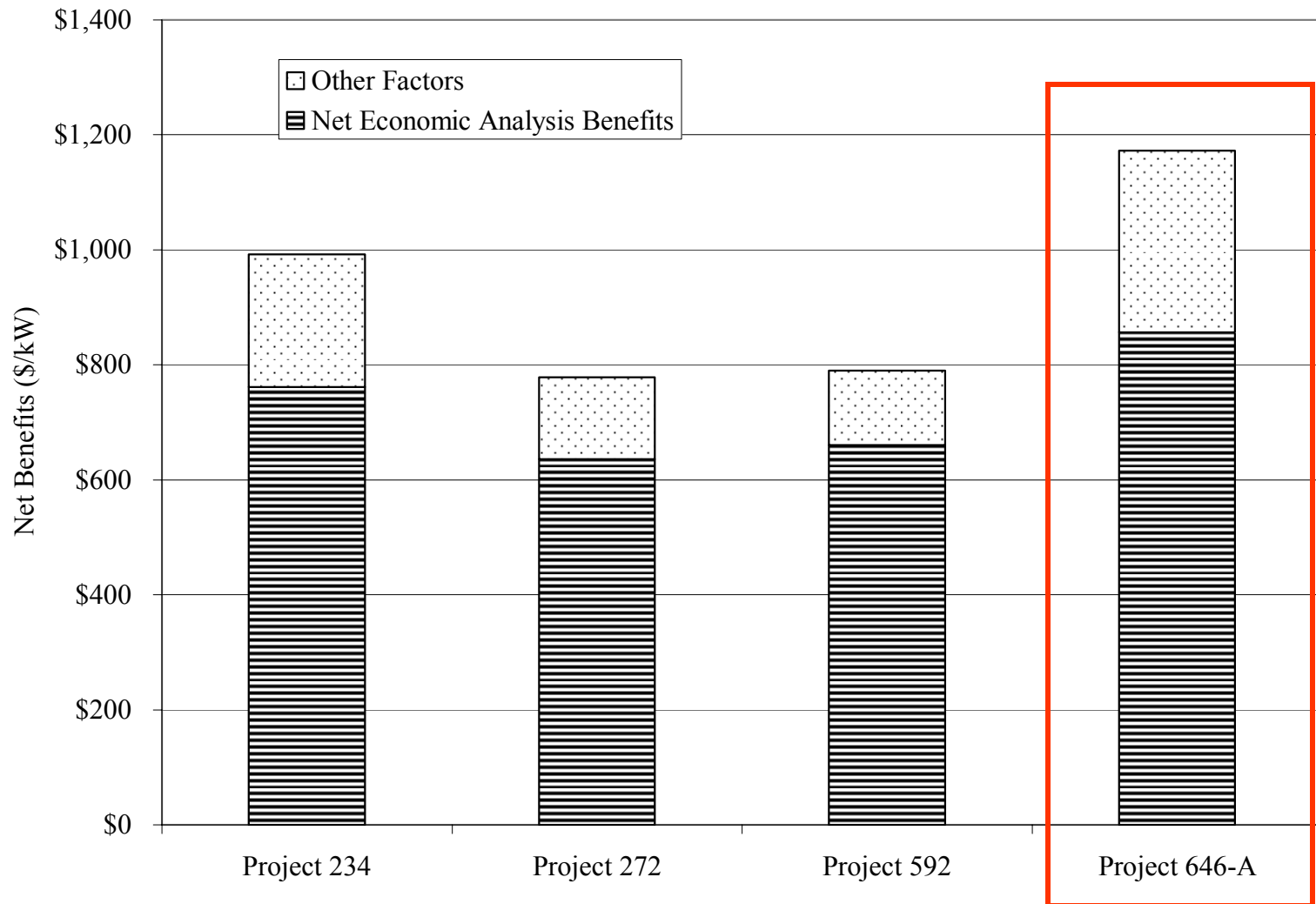


Eight peakers analyzed in detail – 851 was the top peaking proposal





Four Demand Response projects analyzed in detail – Project 646-A was the best in its class





One Energy Efficiency Project Offered

- Only one Energy Efficiency project shortlisted (Project 358)
- With quantity impact, Project 358 creates \$12 million in value, or \$2,650/kW, the highest \$/kW value of all projects
- After factoring in the value of Other Factors and the quantity impact, Project 358 is expected to result in net benefits of \$35 million or \$7,928/kW
- Given the potential of this project to complement other baseload projects and create value, we decided to test it in several portfolios



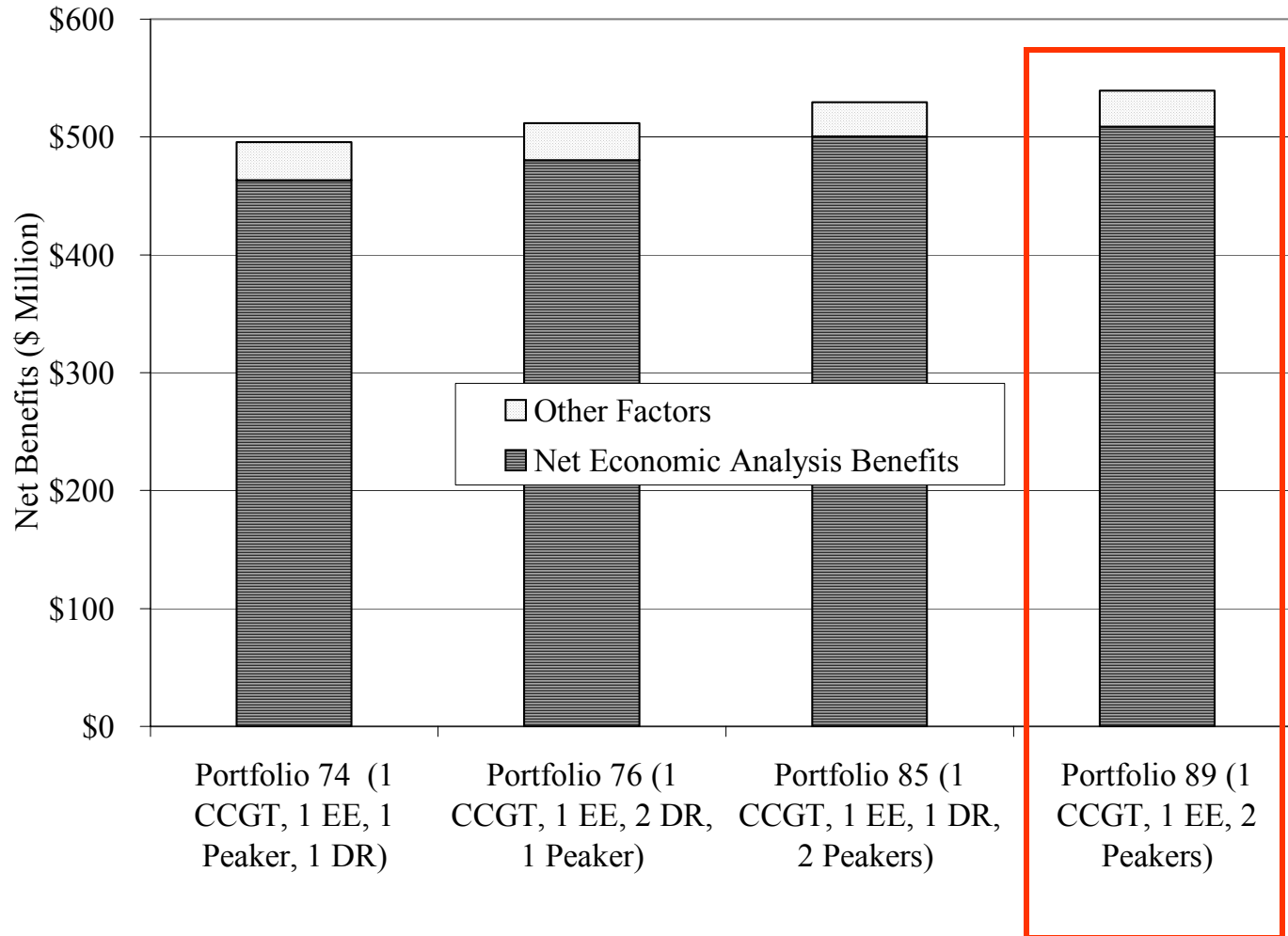
We tested more than 20 different individual combinations of short-listed projects

Combination 1	1 EE	1 DR		
Combination 2	1 EE	1 DR	1 Peaker	
Combination 3	1 EE	1 DR		1 CCGT
Combination 4	1 EE	2 DR		1 CCGT
Combination 5	1 EE	1 DR	1 Peaker	1 CCGT
Combination 6		1 DR	1 Peaker	1 CCGT
Combination 7	1 EE	1 DR	2 Peaker	1 CCGT
Combination 8		1 DR	2 Peaker	1 CCGT
Combination 9	1 EE	2 DR	1 Peaker	1 CCGT
Combination 10	1 EE	2 DR	2 Peaker	1 CCGT
Combination 11	1 EE		1 Peaker	1 CCGT
Combination 12	1 EE		2 Peaker	1 CCGT
Combination 13			2 Peaker	1 CCGT
Combination 14	1 EE		3 Peaker	1 CCGT
Combination 15			4 Peaker	

Note: While there were 15 different portfolio combinations of short-listed projects, we ran more than 20 actual portfolio combinations because we tested many portfolios with each CCGT project. We also tested different peaker and Demand Response projects in portfolios that took more than one of each.



Of all the portfolios, four stood out as having the highest weighted average net benefits (\$ million terms)





Portfolio 89 creates \$8 to \$45 million more in net benefits than the other top portfolios

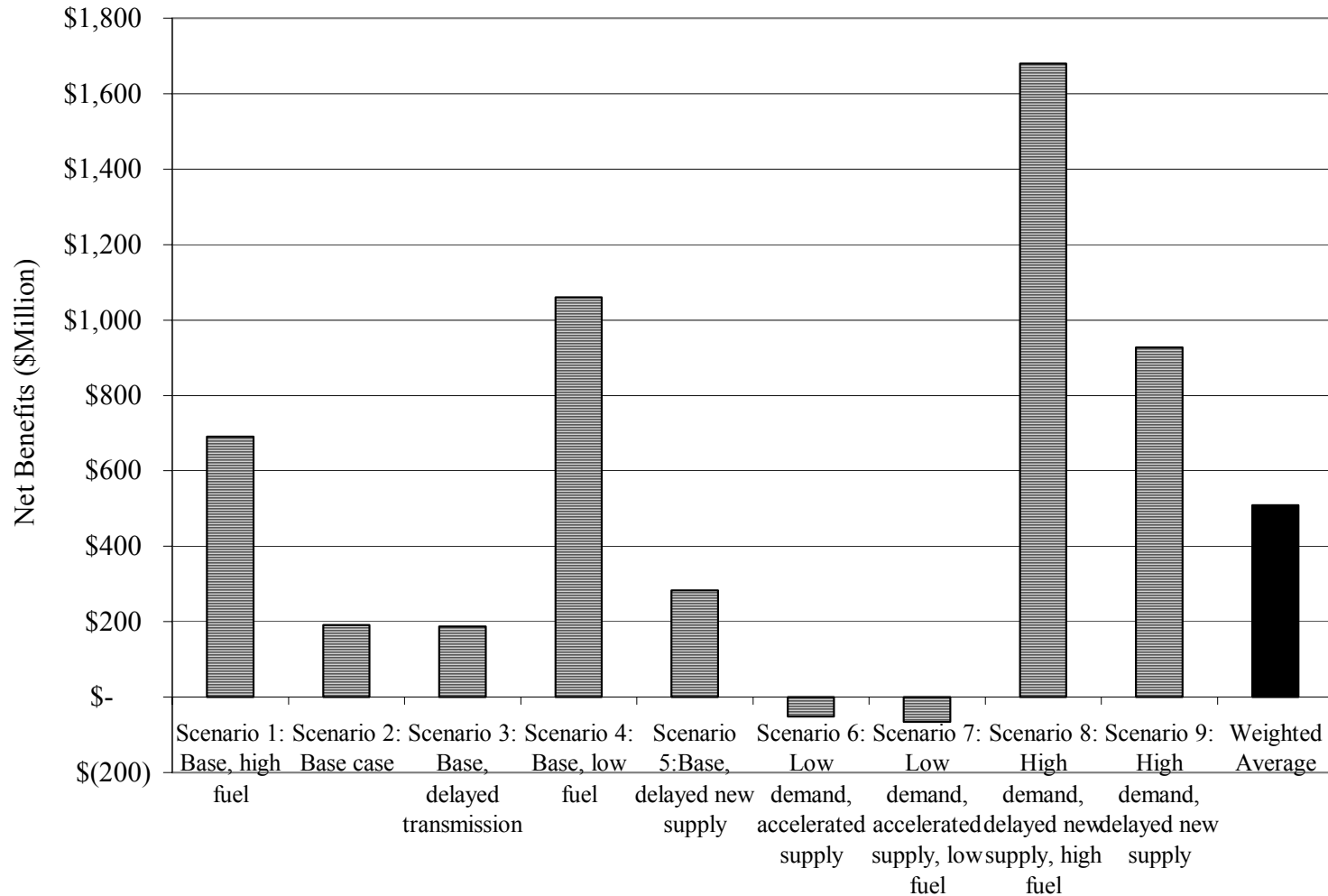
Winning portfolio contains:

- Kleen Energy – 620 MW CCGT in Middletown
 - Waterside Power – 66 MW oil-fired peaker in Stamford
 - Waterbury Power – 96 MW gas-fired peaker in Waterbury
 - Ameresco – 5 MW state wide energy efficiency project
- Created \$509 million (or \$772/kW) in net benefits on a discounted weighted average basis
 - An estimated \$417 million in energy benefits and \$441 million in capacity benefits on a weighted average basis over next 15 yrs.
 - Less than \$350 million of projected contract costs on weighted average basis over next 15 yrs.
 - Discounted net benefits in various scenarios ranged from -\$66 million to \$1,679 million
 - 9.4 points out of possible 15 points awarded for Other Factors – adding \$29 million to overall value
 - Reduces emissions of CO₂, SO₂, NO_x by more than 1 billion tons over next 15 years
 - Improves reliability by reinforcing overall system integrity and reducing potential for blackouts due to gas supply shortages
 - Increases number of market participants in CT, reducing market power concerns in energy market



Winning portfolio offers protection to ratepayers in periods of high fuel prices

Portfolio 89 Net Benefits by Scenarios

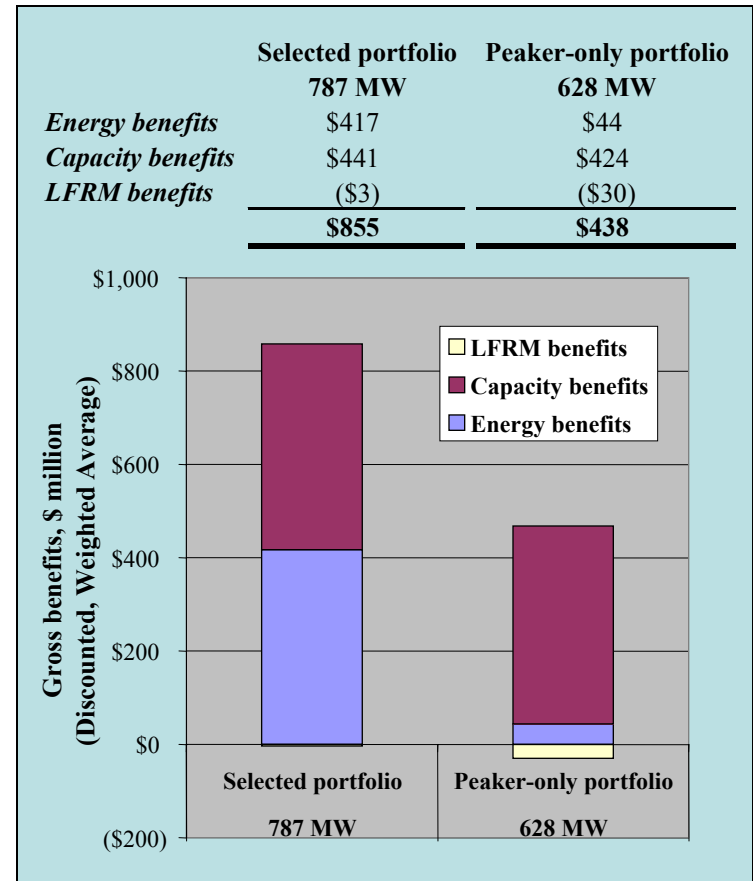




Peaking-only portfolio was subpar alternative

- A portfolio of all conforming peaking project bids was analyzed
- This portfolio of 628 MW of peaking capacity produces discounted net benefits of \$183 million on a weighted average basis – significantly lower than the \$509 million of net benefits projected for the selected portfolio
 - Peakers cannot impact LMPs as much as a CCGT
 - LFRM market still clears at the price cap in the initial years

Discounted gross benefits, \$ millions



Ratepayers would have lost \$325 million in discounted net benefits over 15 years if peaking-only portfolio selected



Market power analysis

- Tested market power implications in two ways: HHI analysis (commonly used test of market power) and analysis of generators' ability to increase prices in the energy market through strategic bidding with and without the winning portfolio
- HHI Analysis reveals the addition of the winning portfolio decreases the level of market concentration by more than 20 points
- Strategic bidding analysis revealed that the large incumbents in Connecticut have reduced potential to increase energy prices after inclusion of four projects that constitute the winning portfolio
- Three new players introduced to Connecticut market as a result of this RFP process



How does this portfolio meet needs of EIA

➤ **Result in lowest reasonable cost**

- All projects in preferred portfolios selected after competitive bid submission
- All projects in preferred portfolios had the lowest cost bids for the best level of performance compared to other bids in the same category

➤ **Increase reliability**

- All demand side projects reduce pressure on network in general
- Most of the generation projects in the preferred portfolios provide additional support to the system, in terms of reliability, voltage support and the potential for reduced RMRs in the future
- CCGTs proved to reduce potential blackout events; included in all preferred portfolios

➤ **Reduce FMCCs for CT ratepayers**

- The cost-benefit evaluation focused on the three ISO-NE markets that contribute most to FMCCs – energy, capacity, and reserves
- The projects with the highest benefits and most reasonable costs were selected for the preferred portfolios

➤ **Environmental emissions reduced by more than 1 billion tons over 15 years** 34



Next steps

- Oral Arguments April 30, 2007
- Utilities to submit signed confidentiality agreements to DPUC by April 30, 2007 to obtain relevant information on winning bids
- Final Decision to be issued on May 3, 2007
- Utilities and winning bidders to execute contracts and submit executed contracts to DPUC for approval no later than May 18, 2007
- Winning bidders to submit full project security deposit (\$100/kW for generation and \$35/kW for DR) to respective utilities by May 18, 2007
- Contested case proceeding will have public hearings in July after utility review of financial and accounting materials



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Glossary (1/2)

- CCGT: Combined Cycle Gas Turbine
- CFD: Contract For Differences
- CO₂: Carbon Dioxide
- COD: Commercial Operation Date
- DR: Demand Response
- EDC: Electric Distribution Company
- EE: Energy Efficiency
- EIA: Energy Independence Act
- FCM: Forward Capacity Market
- FMCC: Federally Mandated Congestion Charges
- HHI: Herfindahl-Hirschman Index (test of market power)



Glossary (2/2)

- ISO-NE: Independent System Operator of New England
- kW: Kilowatt
- LFRM: Locational Forward Reserve Market
- LMP: Locational Marginal Price (day ahead or real time energy)
- MMBTu: Million British Thermal Units
- MW: Megawatt
- NO_x: Nitrogen Oxide
- NPV: Net Present Value
- RFP: Request for Proposals
- RMR: Reliability Must Run contract
- SO₂: Sulfur dioxide



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Detailed portfolio results (1/3)

Portfolio Name	Portfolio 61	Portfolio 62	Portfolio 63	Portfolio 64	Portfolio 65	Portfolio 66	Portfolio 67	Portfolio 68
Projects	A, D, I	A, D, I, C	A, D, O	A, D, I, O	A, D, I, O, Q	A, D, I, C, O	A, D, I, C, O, Q	A, D, O, Q, M
Portfolio Size (Total MW)	707	857	698	773	960	923	1110	972
Portfolio Mix	1 CCGT, 1 EE, 1 DR	1 CCGT, EE, 2 DR	1 CCGT, 1 EE, 1 Peaker	1 CCGT, 1 EE, 1 DR, 1 Peaker	1 CCGT, 1 EE, 1 DR, 2 Peaker	1 CCGT, 1 EE, 2 DR, 1 Peaker	1 CCGT, 1 EE, 2 DR, 2 Peaker	1 CCGT, 1 EE, 3 Peaker
Average Benefits - ENERGY (\$/kW)	\$ 390	\$ 324	\$ 399	\$ 365	\$ 310	\$ 326	\$ 279	\$ 306
Average Benefits - ENERGY (\$ million)	\$ 222	\$ 212	\$ 226	\$ 228	\$ 241	\$ 232	\$ 242	\$ 235
Average Benefits - CAPACITY (\$/kW)	\$ 303	\$ 441	\$ 305	\$ 373	\$ 468	\$ 488	\$ 570	\$ 449
Average Benefits - CAPACITY (\$ million)	\$ 173	\$ 290	\$ 172	\$ 233	\$ 365	\$ 347	\$ 493	\$ 345
Average Benefits - LFRM (\$/kW)	\$ 1	\$ 0	\$ (4)	\$ (6)	\$ (18)	\$ (5)	\$ (17)	\$ (18)
Average Benefits - LFRM (\$ million)	\$ 1	\$ 0	\$ (2)	\$ (4)	\$ (14)	\$ (3)	\$ (14)	\$ (14)
Average Benefits (\$/kW)	\$ 695	\$ 766	\$ 700	\$ 733	\$ 760	\$ 809	\$ 832	\$ 737
Average Benefits (\$million)	\$ 395	\$ 502	\$ 395	\$ 457	\$ 592	\$ 575	\$ 720	\$ 566
Average Costs (\$/kW)	\$ 493	\$ 440	\$ 472	\$ 431	\$ 456	\$ 416	\$ 450	\$ 461
Average Costs (\$ million)	\$ 280	\$ 288	\$ 267	\$ 269	\$ 355	\$ 296	\$ 389	\$ 354
Average Net Benefits (\$/kW)	\$ 202	\$ 326	\$ 228	\$ 301	\$ 304	\$ 393	\$ 382	\$ 276
Average Net Benefits (\$ million)	\$ 115	\$ 214	\$ 129	\$ 188	\$ 237	\$ 279	\$ 331	\$ 212
Combined Points for Other Factors	10.0	10.4	9.3	9.6	10.1	10.2	9.8	9.9
Value of OF based on Median (\$ million)	\$ 30	\$ 32	\$ 28	\$ 29	\$ 31	\$ 31	\$ 30	\$ 30
Option Value (\$/kW)	\$ 270	\$ 234	\$ 272	\$ 246	\$ 197	\$ 215	\$ 177	\$ 199
Option Value (\$ million)	\$ 154	\$ 154	\$ 154	\$ 153	\$ 153	\$ 153	\$ 153	\$ 153
Average NB incl. OF and OV (\$/kW)	\$ 525	\$ 608	\$ 550	\$ 594	\$ 540	\$ 652	\$ 593	\$ 514
Average NB incl. OF and OV (\$/million)	\$ 299	\$ 399	\$ 311	\$ 371	\$ 421	\$ 463	\$ 514	\$ 395



Detailed portfolio results (2/3)

Portfolio Name	Portfolio 71	Portfolio 72	Portfolio 73	Portfolio 74	Portfolio 74e	Portfolio 74q	Portfolio 75	Portfolio 76	Portfolio 76e	Portfolio 76q	Portfolio 77
Projects	E, D, I	E, D, I, C	E, D, O	E, D, I, O	E, I, O	E, I, O	E, D, I, O, Q	E, D, I, C, O	E, I, C, O	E, I, C, O	E, D, I, C, O, Q
Portfolio Size (Total MW)	700	850	691	766	761	766	953	916	911	916	1103
Portfolio Mix	1 CCGT, 1 EE, 1 DR	1 CCGT, 1 EE, 2 DR	1 CCGT, 1 EE, 1 Peaker	1 CCGT, 1 EE, 1 DR, 1 Peaker	1 CCGT, 1 DR, 1 Peaker	1 CCGT, 1 EE, 1 DR, 1 Peaker	1 CCGT, 1 EE, 1 DR, 2 Peaker	1 CCGT, 1 EE, 2 DR, 1 Peaker	1 CCGT, 2 DR, 1 Peaker	1 CCGT, 2 DR, 1 Peaker	1 CCGT, 1 EE, 2 DR, 2 Peaker
Average Benefits - ENERGY (\$/kW)	\$ 626	\$ 555	\$ 662	\$ 597	\$ 601	\$ 617	\$ 485	\$ 530	\$ 533	\$ 547	\$ 447
Average Benefits - ENERGY (\$ million)	\$ 359	\$ 366	\$ 376	\$ 375	\$ 375	\$ 387	\$ 379	\$ 379	\$ 379	\$ 391	\$ 389
Average Benefits - CAPACITY (\$/kW)	\$ 680	\$ 664	\$ 677	\$ 665	\$ 667	\$ 665	\$ 579	\$ 635	\$ 634	\$ 635	\$ 559
Average Benefits - CAPACITY (\$ million)	\$ 390	\$ 438	\$ 385	\$ 418	\$ 416	\$ 418	\$ 453	\$ 454	\$ 451	\$ 454	\$ 486
Average Benefits - LFRM (\$/kW)	\$ 1	\$ 0	\$ (5)	\$ (6)	\$ (6)	\$ (6)	\$ (18)	\$ (5)	\$ (5)	\$ (5)	\$ (16)
Average Benefits - LFRM (\$ million)	\$ 0	\$ 0	\$ (3)	\$ (3)	\$ (3)	\$ (3)	\$ (14)	\$ (3)	\$ (3)	\$ (3)	\$ (14)
Average Benefits (\$/kW)	\$ 1,307	\$ 1,219	\$ 1,334	\$ 1,257	\$ 1,263	\$ 1,276	\$ 1,045	\$ 1,160	\$ 1,162	\$ 1,177	\$ 990
Average Benefits (\$million)	\$ 749	\$ 804	\$ 759	\$ 789	\$ 788	\$ 802	\$ 818	\$ 829	\$ 826	\$ 841	\$ 861
Average Costs (\$/kW)	\$ 560	\$ 521	\$ 539	\$ 519	\$ 519	\$ 519	\$ 520	\$ 488	\$ 487	\$ 488	\$ 494
Average Costs (\$ million)	\$ 321	\$ 344	\$ 307	\$ 326	\$ 324	\$ 326	\$ 407	\$ 349	\$ 346	\$ 349	\$ 430
Average Net Benefits (\$/kW)	\$ 747	\$ 698	\$ 795	\$ 738	\$ 744	\$ 757	\$ 525	\$ 672	\$ 675	\$ 689	\$ 496
Average Net Benefits (\$ million)	\$ 428	\$ 461	\$ 452	\$ 463	\$ 464	\$ 475	\$ 411	\$ 480	\$ 480	\$ 493	\$ 432
Combined Points for Other Factors	10.6	10.3	10.3	9.8	9.4	10.0	8.1	9.5	9.3	9.5	7.7
Value of OF based on Median (\$ million)	\$ 32	\$ 31	\$ 31	\$ 30	\$ 29	\$ 30	\$ 25	\$ 29	\$ 28	\$ 29	\$ 23
Option Value (\$/kW)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3	\$ -	\$ -	\$ -	\$ 3
Option Value (\$ million)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2	\$ -	\$ -	\$ -	\$ 2
Average NB incl. OF and OV (\$/kW)	\$ 803	\$ 745	\$ 849	\$ 785	\$ 790	\$ 805	\$ 560	\$ 712	\$ 715	\$ 730	\$ 526
Average NB incl. OF and OV (\$/million)	\$ 460	\$ 492	\$ 483	\$ 493	\$ 493	\$ 506	\$ 438	\$ 509	\$ 508	\$ 522	\$ 457



Detailed portfolio results (3/3)

Portfolio Name	Portfolio 78	Portfolio 79	Portfolio 85	Portfolio 85q	Portfolio 87	Portfolio 88	Portfolio 89	Portfolio 89e	Portfolio 89q	Portfolio 110	Portfolio 111	Portfolio 112
Projects	E, D, O, Q, M	E, D, O, Q	E, D, I, O, R	E, D, I, O, R	E, D, I, C, O, R	E, D, O, K, R	E, D, O, R	E, O, R	E, O, R	D, O	D, I, O	E, D, B, I, O
Portfolio Size (Total MW)	965	878	861.7	861.7	1011.7	1065.7	786.7	781.7	786.7	71	146	841
Portfolio Mix	1 CCGT, 1 EE, 3 Peaker	1 CCGT, 1 EE, 2 Peaker	1 CCGT, 1 EE, 1 DR, 2 Peaker	1 CCGT, 1 EE, 1 DR, 2 Peaker	1 CCGT, 1 EE, 2 DR, 2 Peaker	1 CCGT, 1 EE, 3 Peaker	1 CCGT, 1 EE, 2 Peaker	1 CCGT, 1 EE, 2 Peaker	1 CCGT, 1 EE, 2 Peaker	1 EE, 1 Peaker	1 EE, 1 DR, 1 Peaker	1 CCGT, 1 EE, 2 DR, 1 Peaker
Average Benefits - ENERGY (\$/kW)	\$ 493	\$ 572	\$ 609	\$ 627	\$ 537	\$ 473	\$ 632	\$ 637	\$ 651	\$ -	\$ -	\$ 549
Average Benefits - ENERGY (\$ million)	\$ 381	\$ 414	\$ 415	\$ 427	\$ 412	\$ 426	\$ 417	\$ 417	\$ 429	\$ -	\$ -	\$ 379
Average Benefits - CAPACITY (\$/kW)	\$ 578	\$ 632	\$ 666	\$ 666	\$ 632	\$ 536	\$ 670	\$ 668	\$ 670	\$ 1,321	\$ 998	\$ 631
Average Benefits - CAPACITY (\$ million)	\$ 447	\$ 457	\$ 454	\$ 454	\$ 486	\$ 483	\$ 441	\$ 437	\$ 441	\$ 83	\$ 118	\$ 436
Average Benefits - LFRM (\$/kW)	\$ (18)	\$ (19)	\$ (5)	\$ (5)	\$ (4)	\$ (21)	\$ (4)	\$ (4)	\$ (4)	\$ (27)	\$ (18)	\$ (5)
Average Benefits - LFRM (\$ million)	\$ (14)	\$ (14)	\$ (3)	\$ (3)	\$ (3)	\$ (19)	\$ (3)	\$ (3)	\$ (3)	\$ (2)	\$ (2)	\$ (3)
Average Benefits (\$/kW)	\$ 1,054	\$ 1,185	\$ 1,270	\$ 1,288	\$ 1,165	\$ 988	\$ 1,298	\$ 1,300	\$ 1,316	\$ 1,294	\$ 980	\$ 1,175
Average Benefits (\$million)	\$ 814	\$ 857	\$ 865	\$ 877	\$ 895	\$ 890	\$ 855	\$ 851	\$ 867	\$ 81	\$ 116	\$ 811
Average Costs (\$/kW)	\$ 528	\$ 538	\$ 535	\$ 535	\$ 504	\$ 540	\$ 525	\$ 525	\$ 525	\$ 130	\$ 241	\$ 505
Average Costs (\$ million)	\$ 408	\$ 389	\$ 365	\$ 365	\$ 387	\$ 486	\$ 346	\$ 344	\$ 346	\$ 8	\$ 28	\$ 349
Average Net Benefits (\$/kW)	\$ 526	\$ 647	\$ 735	\$ 753	\$ 661	\$ 448	\$ 772	\$ 775	\$ 791	\$ 1,164	\$ 739	\$ 669
Average Net Benefits (\$ million)	\$ 406	\$ 468	\$ 501	\$ 513	\$ 508	\$ 404	\$ 509	\$ 507	\$ 521	\$ 73	\$ 87	\$ 462
Combined Points for Other Factors	8.4	8.8	8.8	8.8	7.9	7.2	9.4	9.0	9.4	5.5	5.8	9.5
Value of OF based on Median (\$ million)	\$ 26	\$ 27	\$ 27	\$ 27	\$ 24	\$ 22	\$ 29	\$ 27	\$ 29	\$ 17	\$ 18	\$ 29
Option Value (\$/kW)	\$ 3	\$ 3	\$ -	\$ -	\$ -	\$ 17	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Option Value (\$ million)	\$ 2	\$ 2	\$ -	\$ -	\$ -	\$ 15	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average NB incl. OF and OV (\$/kW)	\$ 562	\$ 687	\$ 774	\$ 792	\$ 692	\$ 490	\$ 816	\$ 817	\$ 834	\$ 1,429	\$ 887	\$ 711
Average NB incl. OF and OV (\$/million)	\$ 434	\$ 497	\$ 527	\$ 540	\$ 532	\$ 441	\$ 537	\$ 535	\$ 549	\$ 90	\$ 105	\$ 491