

Tax Saving Strategies for SCR/NCR Project Planning In the Electric Utility Industry



***2002 Conference on Selective Catalytic Reduction and
Non-Catalytic Reduction for NO_x Control***

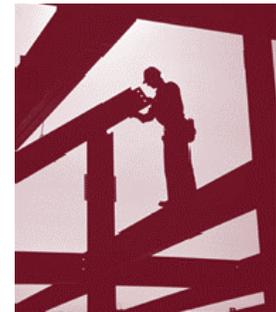
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Industry Pollution Control Conditions

- Environmental – Clean Air Act Amendment Challenges
 - NO_x Emissions Reductions
 - State Implementation Plan (“SIP”)
 - State Specific Regulations
- Economic – Deregulation
 - Cash Flow Maximization
 - Tax Liability Minimization



CURRENT ELECTRIC INDUSTRY CONDITIONS

- Regulated Entities
 - Rapidly Eradicating Fixed Asset Detail
 - In-House Resources Rapidly Disappearing

- Unregulated Entities
 - Race to Construction Completion – “C/T Boom”
 - Fixed Asset Management Efforts Challenged

- Post Construction vs. Integrated Tax Planning

WHAT CAN OWNERS DO TO REDUCE ENVIRONMENTALLY MANDATED CAPITAL INVESTMENT COSTS?

I. FEDERAL TAX

- Certify Qualifying Additions for federal Rapid Amortization Program

II. PROPERTY TAX

- Identify, quantify, and certify Additions that meet state-specific statutory exemption requirements

III. OTHER STATE & LOCAL TAXES

- Maximize the recovery of capital investments through state and local tax incentives, credits or exemptions

WHY ARE OLDER GENERATING ASSETS IMPORTANT?

- Beneficiary of amortization benefits under IRC Sec. 169 (Stations in-service before 1/1/76)
- Beneficiary, in many states, of property tax and sales & use tax abatements
- Regulated retrofits require substantial investment, e.g., \$50M - \$100M for SCR installation

WHY ARE NEW GENERATING ASSETS IMPORTANT?

- Beneficiary, in many states, of property tax and sales & use tax abatements
- New combustion turbine and combined cycle projects have integrated pollution control property – requires regulatory education

TYPES OF INDUSTRY ASSETS UNDER CONSIDERATION:

Air Pollution Controls

- NO_x Reduction & Removal
 - Selective Catalytic Reduction (SCR)
 - Non-Selective Catalytic Reduction (NSCR)
 - Burner Additions, Modifications, and Spacing
 - Wet NO_x systems
 - Process and Burner controls and Process-linked CEMS
- Acid Gas Removal – Scrubbers (SO₂)
- Particulate Handling – Baghouses, ESPs (PM-10)

TYPES OF INDUSTRY ASSETS UNDER CONSIDERATION (cont):

Water Pollution Controls

- Wastewater Process Effluent Systems
- Sanitary Treatment Systems
- AG/UG Piping & Storage Systems — (Fuel/Waste Handling)
- Diking, Containment, & Monitoring Upgrades
- Storm water Protection – (Separators)
- Thermal Discharge Management — (Cooling Towers)

Tax Minimization Considerations

I. FEDERAL DEPRECIATION BENEFITS

A. IRC SEC. 169 – AMORTIZATION OF POLLUTION CONTROL FACILITIES

- Applications filed as part of the election
- NPV of benefit is approximately 6.6%
- Sale leaseback transactions

B. JOB CREATION AND WORKER ASSISTANCE ACT OF 2002

- Bonus depreciation opportunities
- Specific guidelines for self constructed assets



GENERAL DEPRECIATION SYSTEM BENEFITS – IRC SECTION 169

YEAR	20 YEAR - 150 DB			15 YEAR - 150 DB			5 YEAR - AMORTIZATION		
	DEPREC. (%)	DEPREC. (\$)	PRESENT VALUE OF AFTER TAX DEPRECIATION	DEPREC. (%)	DEPREC. (\$)	PRESENT VALUE OF AFTER TAX DEPRECIATION	DEPREC. (%)	DEPREC. (\$)	PRESENT VALUE OF AFTER TAX DEPRECIATION
1	3.750	\$3,750	\$1,443	5.00	\$5,000	\$1,925	10.00	\$10,000	\$3,849
2	7.219	\$7,219	\$2,573	9.50	\$9,500	\$3,386	20.00	\$20,000	\$7,128
3	6.677	\$6,677	\$2,203	8.55	\$8,550	\$2,821	20.00	\$20,000	\$6,600
4	6.177	\$6,177	\$1,887	7.70	\$7,700	\$2,353	20.00	\$20,000	\$6,111
5	5.713	\$5,713	\$1,616	6.93	\$6,930	\$1,961	20.00	\$20,000	\$5,658
6	5.285	\$5,285	\$1,384	6.23	\$6,230	\$1,632	10.00	\$10,000	\$2,620
7	4.888	\$4,888	\$1,186	5.90	\$5,900	\$1,431			
8	4.522	\$4,522	\$1,016	5.90	\$5,900	\$1,325			
9	4.462	\$4,462	\$928	5.91	\$5,910	\$1,229			
10	4.461	\$4,461	\$859	5.90	\$5,900	\$1,136			
11	4.462	\$4,462	\$795	5.91	\$5,910	\$1,054			
12	4.461	\$4,461	\$736	5.90	\$5,900	\$974			
13	4.462	\$4,462	\$682	5.91	\$5,910	\$903			
14	4.461	\$4,461	\$631	5.90	\$5,900	\$835			
15	4.462	\$4,462	\$585	5.91	\$5,910	\$774			
16	4.461	\$4,461	\$541	2.95	\$2,950	\$358			
17	4.462	\$4,462	\$501						
18	4.461	\$4,461	\$464						
19	4.462	\$4,462	\$430						
20	4.461	\$4,461	\$398						
21	2.231	\$2,231	\$184						
TOTAL:	100%	\$ 100,000	\$ 21,044	100%	\$ 100,000	\$ 24,096	100%	\$ 100,000	\$ 31,965

ASSUMPTIONS:

ASSET COST	\$100,000
DISCOUNT RATE	8%
TAX RATE	40%

PV TAX SAVINGS @ 80% of CAPITALIZED INVESTMENT per IRC Sec. 291(c) :

20 YEAR TO 5 YEAR	31,965	-	21,044	=
15 YEAR TO 5 YEAR	31,965	-	24,096	=

@MACRS Useful Life

10,921	=	8.737%	6.553%
7,869	=	6.295%	6.295%

IRC SEC. 169 AMORTIZATION OF POLLUTION CONTROL FACILITIES

- Eligible equipment certified by state and federal authorities
- State certifying authority must first certify that the equipment conforms to:
 - The state program requirements, or
 - Requirements for pollution abatement or control
- Additions to Facilities in-service before January 1, 1976
- Election made in the year the facility is placed in service or in the subsequent tax year
- Certification unnecessary to make election; file the applications to claim election

JOB CREATION AND WORKER ASSISTANCE ACT OF 2002

- Additional 30% first year depreciation deduction
- Eligible property includes:
 - MACRS Recovery period of 20 years or less
 - Qualified leasehold improvements
 - Water utility property
 - Non-IRC Sec. 197 computer software

JOB CREATION AND WORKER ASSISTANCE ACT OF 2002

- Acquired after 9/10/01, before 9/11/04
- Original use must commence with the taxpayer after 9/11/01, placed in service before 9/11/05
- Binding contract considerations
- Self-constructed asset considerations



JOB CREATION AND WORKER ASSISTANCE ACT OF 2002

Estimated Benefits Associated with IRC Sec. 169 and Additional 30% Depreciation:

Assumptions

Asset Cost:	\$	1,000,000
Discount Rate:		8%
Tax Rate:		40%
Present Value Calculation:		Mid-year Convention
Acquisition		Post 9/11/01 Commitment
In-Service		Post 9/11/01, Pre 9/11/05

Tax Treatment	PV of Tax Savings from Depreciation & Amortization	NPV of Additional Tax Savings over 20-yr MACRS	NPV of Additional Tax Savings as % of Asset Cost
20-yr MACRS	\$210,441	\$0	0%
20-yr MACRS w/ 30% Bonus Depreciation	\$262,779	\$52,338	5.23%
20-yr MACRS w/ IRC Sec. 169	\$275,968	\$65,527	6.55%
20-yr MACRS w/ IRC Sec. 169 & 30% Bonus Depreciation	\$304,706	\$94,265	9.43%

II. PROPERTY TAX BENEFITS FOR POLLUTION CONTROL FACILITIES

- Eligible Pollution Control Additions
 - Wide ranging; requires statutory & engineering review
 - Retroactive Analysis – Pollution Control Additions
 - Prospective Analysis – Pollution Control Additions



II. PROPERTY TAX BENEFITS FOR POLLUTION CONTROL FACILITIES

■ Real Tax Savings (Based Upon Effective Tax Rates)

- Alabama

$$\begin{aligned} & \text{Net Book Value} * \text{Valuation Rate} * \text{Tax Rate} \\ & \$1,000,000 * 30\% * 25 \text{ mils} = \$7,500 \end{aligned}$$

- Ohio

$$\begin{aligned} & \text{Asset Cost} * \% \text{ Good} * \text{Assess. Rate} * \text{Tax Rate} \\ & \$1,000,000 * 98.3\% * 25\% * 28 \text{ mils} = \$6,900 \end{aligned}$$

- Indiana

$$\begin{aligned} & \text{Asset Cost} * \text{Fed. Tax Depr. Adj.} * \text{Tax Rate} \\ & \$1,000,000 * 95\% * 11 \text{ mils} = \$10,500 \end{aligned}$$

II. PROPERTY TAX BENEFITS FOR POLLUTION CONTROL FACILITIES

■ Pre-certification Lists

- *Connecticut*
- *West Virginia*

■ Tax Certification Required

- *Alabama*
- *Kentucky*
- *Georgia*

■ Environmental Regulatory Certification Required

- *Texas*
- *Michigan*
- *Ohio*
- *North Carolina*

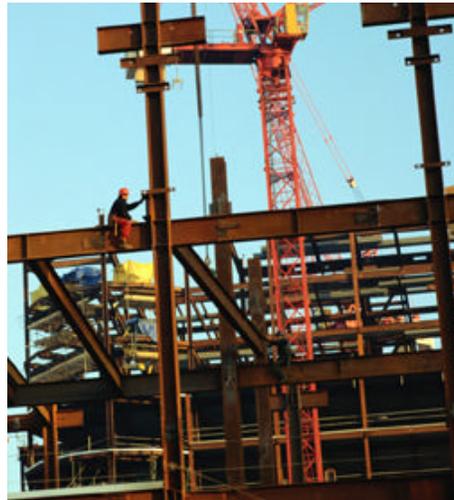
■ Locale-Specific Considerations

- *Virginia*
- *Florida*



III. OTHER STATE & LOCAL TAX BENEFITS FOR POLLUTION CONTROL FACILITIES

- Income tax benefits from amortization or abatements
- Sales & use tax benefits
- Franchise tax opportunities



III. OTHER STATE & LOCAL TAX BENEFITS FOR POLLUTION CONTROL FACILITIES

■ Qualification

- Eligible equipment may require certification by state environmental authorities prior to claiming abatement or credit
- Certain states may provide pre-certified equipment lists for air and water additions

■ Eligible Pollution Control Additions

- Wide ranging; requires statutory and engineering review
- Retroactive Analysis – Pollution Control Additions
- Prospective Analysis – Pollution Control Additions

III. OTHER STATE & LOCAL TAX BENEFITS FOR POLLUTION CONTROL FACILITIES

State	Depr.	Apport	Tax Base	Tax Credit	Amort.
AZ	X			X	
AR					
CA	X			X	
CO				X	X
KY		X			X
MA					
MI					
NY				X	X
OH		X	X		X
PA			X		

III. OTHER STATE & LOCAL TAX BENEFITS FOR POLLUTION CONTROL FACILITIES

■ Income/Franchise Tax Examples

- Arizona
 - Accelerated Amortization after add back of IRC Sec. 169
 - 10% Investment Credit
- Arkansas
 - Accelerated Amortization after add back of IRC Sec. 169
- Kentucky
 - Accelerated Amortization – follows IRC Sec. 169
 - Apportionment Exclusion – certified facilities

III. OTHER STATE & LOCAL TAX BENEFITS FOR POLLUTION CONTROL FACILITIES

■ Income/Franchise Tax Examples

- Massachusetts
 - Accelerated Amortization – follows IRC Sec. 169
 - Incentives – 3% of all property placed in service
- Ohio
 - Accelerated Amortization – follows IRC Sec. 169
 - Apportionment Exclusion – certified equipment
 - Franchise Base Reduction – certified property (Utilities not subject to franchise tax)

Tax Planning Benefits – Case Studies

Section 169 Benefits

State	Project	Rating (MW)	Field In Service	Projected PC Cost (\$ M)	NPV Savings (\$)
<i>Deloitte & Touche Experience</i>					
CA	SCR/NO _x Control	700	2001	66.0	4,356,000
CA	SCR/NO _x Control	175	2001	8.0	528,000
NC	SCR/NO _x Control	570	2002	65.7	4,336,200
NC	SCR/NO _x Control	1,080	2002	171.2	11,299,200
OH	SCR/NO _x Control	1,300	2001	100.0	6,600,000
CA	Low NO _x Burner	220	2001	1.5	99,000
IN	Low NO _x Burner	205	1999	3.8	250,800
NC	Low NO _x Burner	1,080	2000	16.0	1,056,000
OH	Low NO _x Burner	1,300	1999	13.0	858,000
TX	Cooling Tower	100	2000	0.8	52,800
TX	Compressor Station Upgrades	N/A	2000	3.0	198,000
VA	Cooling Tower	240	1999	3.5	231,000
WV	Landfill	N/A	2000	1.6	105,600
<i>Sample of Other Recent and Future Projects</i>					
CA	SCR/NO _x Control	640	2001	6.5	429,000
IL	SCR/NO _x Control	590	2002	50.0	3,300,000
OH	SCR/NO _x Control	600	2003	67.5	4,455,000

Tax Planning Benefits – Case Studies

U.S. EPA Review Experience

U.S. EPA Region Experience with Section 169 Certification Efforts

Region	States	Experience
Region 1	CT, ME, MA, NH, RI, VT	Informal established procedure, has not processed application in 5 years
Region 2	NJ, NY	Established procedure, has not processed application in 10 years
Region 3	DE, MD, PA, VA, WV DC	Established procedure, recently certified applications
Region 4	AL, FL, GA, KY, MS, NC, SC, TN	Established procedure, recently certified applications
Region 5	IL, IN, MI, MN, OH, WI	Established procedure, recently certified applications
Region 6	AR, LA, NM, OK, TX	Established procedure end of 2001, has not certified application
Region 7	IA, KS, MO, NE	Not Available
Region 8	CO, MT, ND, SD, UT, WY	Established procedure, has certified, but very few (one/year)
Region 9	AZ, CA, HI	First recent application in 2002, still establishing procedure
Region 10	AK, ID, OR, WA	No established procedure, has contacts, application not processed in 14 years

Tax Planning Benefits – Case Studies

State Property Tax Exemption Benefits

State	Project Type	Capacity (MW)	Projected Facility Cost (\$ M)	Projected PC Investment (\$ M)	Anticipated Property Tax Savings (First Year) (\$)
AL	CT - Combined Cycle	850	>250.0	38.0	285,000
	SCR			2.5	18,750
GA	CT - Combined Cycle	1,240	>500.0	36.0	340,000
	CT - Simple Cycle	640	>230.0	42.0	380,000
OH	CT - Combined Cycle	1,240	600.0	55.0	375,000
	CT - Simple Cycle	640	230.0	36.0	140,000
IN	CT - Simple Cycle	170	63.0	8.0	80,000
	CT - Simple Cycle	80	27.5	3.3	33,000
TX	CT - Combined Cycle	830	>240.0	41.0	615,000
	CT - Combined Cycle	1,000	475.0	39.0	585,000
	CT - Combined Cycle	500	185.0	23.0	345,000
MI	Nuclear	2,100	>1,300.0	200.0	>600,000

Issues and Moving Forward

APPROACH TO POLLUTION CONTROL ANALYSES

- Requires a combination of technical and tax expertise
- Process Mechanics:
 - Identify eligible property
 - Quantify eligible project costs
 - Calculate the aggregate tax savings
 - Prepare certification submissions for regulatory approval
- Implementation and Follow-up
 - Prepare filing documentation to accompany the tax return(s)
 - Implement the prospective savings

PROCESS MECHANICS CHALLENGES

- Verify Pollution Control Costs
 - Actual vs. engineering estimates
 - Owner vs. EPC Contractor costs
 - Direct costs vs. Indirect Costs
- Certify Additions
 - Educate and Communicate with Regulators
 - Prepare and Submit Certification Applications
 - Follow Through
- Implement Certifications
 - Immediate Tax Objectives
 - Prospective Implications

