



Quick Take

Utilities Should Act Now to Take Advantage of VW Settlement Electrification Opportunities

By Bob Dibella

Summary

Electric utilities should be in contact today with their state's designated recipient of Volkswagen diesel settlement funds. This settlement provides \$2.7 billion in incentives for NOx reduction, potentially including electrification of a broad range of transportation equipment and associated charging infrastructure. Utilities with beneficial electrification programs may be able to leverage these funds to support environmental and load growth objectives, or may be able to work with recipients to co-develop and cost share in new electrification/NOx reduction programs. Advocating at the state level is critical since many states have yet to determine how these funds will be spent, and since non-electrification NOx reduction strategies may also be eligible.

What the Settlement Means to the States

The \$2.7 billion will be distributed among the 50 states and territories to mitigate excess NOx emissions from affected VW vehicles. The funds each state receives will be in proportion to the number of non-compliant vehicles sold within the state. Now that the settlement is approved, each state must designate a beneficiary agency to receive the funds, and which will be responsible for developing and delivering the NOx reduction programs. Some states have already selected the beneficiary agency, and others are in the process of doing so. So far, these agencies have included air-quality, environmental protection, and transportation agencies. States can use the funds for NOx mitigation from both



on-road (trucks, school buses) and off-road (locomotives, tugboats, forklifts, etc.) sources. The initial allocations of the \$2.7 billion by state are provided in [Table 1](#).

TABLE 1. INITIAL SETTLEMENT ALLOCATIONS BY STATE (\$MILLIONS)

ND	\$7.5	LA	\$18.0	MI	\$60.3
HI	\$7.5	KY	\$19.0	CO	\$61.3
SD	\$7.5	OK	\$19.1	WI	\$63.6
AL	\$7.5	IA	\$20.2	NJ	\$65.3
WY	\$7.5	ME	\$20.3	OR	\$68.2
DC	\$7.5	NV	\$22.3	MA	\$69.1
DE	\$9.1	AL	\$24.1	MD	\$71.0
MS	\$9.2	NH	\$29.5	OH	\$71.4
WV	\$11.5	SC	\$31.6	NC	\$87.2
NE	\$11.5	UT	\$32.4	VA	\$87.6
MT	\$11.6	IN	\$38.9	IL	\$97.7
RI	\$13.5	MO	\$39.1	WA	\$104.0
AR	\$14.0	TN	\$42.4	PA	\$110.7
KS	\$14.8	MN	\$43.6	NY	\$117.4
ID	\$16.2	CT	\$51.6	FL	\$152.4
NM	\$16.9	AZ	\$53.0	TX	\$191.9
VT	\$17.8	GA	\$58.1	CA	\$371.3

What the Settlement Means to Electric Utilities

Of special interest to electric utilities are provisions in the settlement that permit higher levels of incentives for projects that replace diesel equipment with fully electric equipment. For example, the fund may pay up to 40% of the cost to repower diesel engine equipment with a new cleaner diesel or alternate fuel (e.g. CNG, propane, Hybrid), but may pay 75% of the cost to repower with an all-electric drive, including the costs of installation and charging infrastructure. Incentives may be available for charging facilities and a wide range of on and off-road transportation equipment with significant NOx reduction and energy sales, as illustrated in [Table 2](#).



TABLE 2. TYPICAL NO_x AND ENERGY CHARACTERISTICS OF QUALIFYING TECHNOLOGIES

Technology	Typical NO _x Emissions (lbs./year)	Potential Load Impact (kWh/year)
Local freight trucks and port drayage trucks	900 – 1,600	80,000 – 100,000
School, shuttle, and transit buses	1,400	80,000
Locomotive freight switchers	16,500	200,000 – 100,000,000
Ferries/tugs	69,000 – 110,000	10,000 – 260,000
Shore power for ocean going vessels	900 – 1,600 (per call)	16,000 – 68,000 (per call)
Airport ground support equipment	750	10,000 – 150,000
Forklifts	800	12,000 – 30,000

The settlement incentives complement perfectly the rapidly growing number of utility beneficial electrification programs. These programs, which promote replacement of fossil fuel equipment with electric equipment for emissions reduction, customer service, and load growth impacts can potentially leverage state incentives to support their own electrification efforts. For example, for many years CenterPoint Energy in Houston has provided marketing, technical support, and account management services to support growth in the share of electric forklifts in its service territory, and has also facilitated customer applications for incentives to the Texas Emissions Reductions Program (TERP).

How Utilities Can Get Involved

Utilities should position themselves to play an active role in the mitigation effort. Utilities are, after all, important stakeholders in any electrification effort and possess strong relationships with energy consumers and trade allies. We believe that utilities should act on this opportunity by immediately engaging with their state environmental agencies to determine who will act as the beneficiary agent. By working with this agent, utilities may be able to earmark funds and create an incentive pool that will expand or accelerate their own electrification programs, and the agent will benefit from a stable and low-cost pipeline of NO_x reduction projects. Utilities may also seek to partner with beneficiary agencies to create joint programs in which both parties share the costs, thereby significantly increasing the impact and decreasing the risk for both parties.

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Although beneficiaries are not required to file their plans to spend the money until mid-2017, since some states are holding public comment hearings beginning in November, since lawmakers in other states are already drafting legislation that will direct the funds to specific projects, and since advocates are already lobbying in support of their preferred technologies, the time for utilities to get involved is now.

How ICF Can Help

ICF brings a full set of capabilities to design and implement NOx reduction and electrification programs, with particular expertise in diesel emission reduction opportunities. Our staff have deep technical knowledge of NOx emission control strategies for light-duty, heavy-duty, and off-road vehicles. We have helped federal, state, local transportation and environmental agencies, and utilities with evaluating candidate control strategies to maximize the cost effectiveness of emission reduction and beneficial electrification programs. Our staff have also helped to develop clean vehicle incentive programs for state agencies (such as California's Hybrid Truck and Bus Voucher Incentive Program) and for national programs funded through legal settlements (such as the Clean Buses for Kids Program). ICF has also assessed beneficial electrification programs for more than 15 electric utilities, and currently implements such programs for many utilities, including CenterPoint Energy, JEA, Entergy, and Alliant Energy.

ICF has a proven approach to forecasting the environmental, financial, and electric distribution system impacts of electrification programs, including potential models and technology databases that can be calibrated to any utility's service territory. ICF has evaluated more than 60 individual electro-technologies for inclusion in utility electrification programs including: material handling equipment, marine/port equipment, airport ground support equipment, locomotives, mining equipment, agricultural equipment, industrial processes, and other applications. ICF also has the infrastructure necessary to quickly stand-up and administer these programs, including economic analysis, technical support, account management, customer acquisition, marketing, call center, incentive processing, QA/QC, and data tracking.

ICF can help utilities design and deliver their own programs, can facilitate discussions with beneficiary agencies to secure incentives, and can support joint efforts between utilities and agencies to evaluate, design, and deliver programs.

Read more about [ICF's beneficial electrification services](#).

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