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December 2007

Texas Emissions Reduction Plan (TERP)

Report to the Texas Legislature on Requirements for Implementing an Internet-Based Application Process for TERP Rebate Grants

Air Quality Division

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Texas Emissions Reduction Plan (TERP)
Report to the Texas Legislature on
Requirements for Implementing an
Internet-Based Application Process for TERP
Rebate Grants

Prepared by
Air Quality Division

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Contents

Summary	1
Program Processes	2
Program Requirements	3
Existing Resources	3
CROMERR	4
Oracle Database	5
Time and Cost Estimates	5
Other Limitations	6

Attachments

1. Internet Application Process Chart	13
2. EPA CROMERR Overview	15

Summary

The Texas Emissions Reduction Plan (TERP) was established in 2001 under Chapter 386, Texas Health and Safety Code, to authorize the Texas Commission on Environmental Quality to give out voluntary monetary incentives for projects to reduce the emissions of nitrogen oxides (NO_x) from mobile emission sources, such as heavy-duty vehicles and non-road equipment. NO_x combines with volatile organic compounds in the presence of sunlight to form ground-level ozone, which is a component of smog. The air quality in certain areas of Texas does not meet federal Clean Air Act standards for levels of ground-level ozone. Under the TERP, the TCEQ awards incentives in the form of grants to owners and operators of vehicles and equipment in these areas to replace or upgrade their vehicles and equipment to cleaner models, thereby reducing NO_x emissions.

Under Texas Health and Safety Code 386.117, the TCEQ awards a portion of the grant funds under a simplified application process called the Rebate Grant Program. The simplified Rebate Grant Program was established to ensure that operations with only a few vehicles or pieces of equipment to upgrade could participate in the program using streamlined processes for grant applications, contracting, reimbursement, and reporting.

Currently, prospective grantees submit applications using a hard-copy form. Senate Bill 12, 80th Legislature, requires the TCEQ to investigate the requirements for establishing an Internet-based application process for TERP rebate grants and to report those requirements to the Legislature. This report is submitted in fulfillment of that requirement.

In this assessment, two existing systems were first examined, Texas Online and the State of Texas Environmental Electronic Reporting System (STEERS). However, the TCEQ determined that those systems would not address the needs of the TERP program.

Discounting the use of an existing system, a system will need to be developed specifically for the TERP program. This system will need to comply with the U.S. Environmental Protection Agency's (EPA) Cross-Media Electronic Reporting Regulation (CROMERR) and with TCEQ's internal information technology standards. Based on the security requirements of CROMERR and the TCEQ's standards, an Oracle database platform would need to be developed for the TERP data in order to successfully implement an Internet-based approach to applying for rebate grants.

Tentative time and resource estimates in this report, are contingent on such a migration to an Oracle database system. It is estimated that online rebate-grant application would require eight to 12 months and between \$157,280 and \$197,726 for development, with an additional \$1,008 in annual computer costs. Development and implementation of an Oracle

database system for the TERP Program will also take about eight to 12 months and approximately \$500,000 to complete. The time frame for developing an Internet-based application would overlap the time frame for development of an Oracle database system.

A number of factors could restrict the functionality of an Internet-based rebate grant application. Those limitations include the need to maintain current levels of oversight over the grant process and the time needed to review each application, as well as uncertain levels of Internet use among the TERP applicants.

In summary, the development process, implementation, and use of an Internet-based rebate grant application will depend first on the development and implementation of an Oracle database system for the overall TERP grant program. Existing data will then need to be migrated to this new system and all system processes and procedures developed and implemented. The system would need to comply with all EPA CROMERR requirements as well as TCEQ information technology policies and procedures. Availability of funds for these efforts would need to be determined and the funds allocated.

Program Processes

The TERP Rebate Grant Program is a simplified application process under the Emissions Reduction Incentive Grant Program. Rebate grants are available for diesel on-road and non-road replacement and repower projects. Applications are reviewed, processed, and awarded on a first-come, first-served basis. The application form is shorter than the forms used for the other TERP grants and the eligible reimbursement amounts are predetermined based on default usage rates (miles or hours). If an application is determined complete and eligible, the grant is awarded and a contract issued without additional ranking or competitive selection. Incomplete applications are returned. The grants offset the incremental costs associated with reducing emissions of NO_x from high-emitting internal combustion engines.

Currently, applications for a rebate grant are submitted on paper forms. The number of rebate grant applications applied for in the fiscal year (FY) 2006-2007 biennium was 339 for FY06 and 883 for FY07, for a total of 1,222 applications. Once received, the data submitted in these applications is entered into a Microsoft Access database for tracking and reporting purposes. The application is then reviewed by staff and a decision is made as to the eligibility of the application. If the application meets the criteria a contract is initiated.

Program Requirements

Based on a high level analysis of automating this program, an online system would need to assist the grant staff in accomplishing the following tasks:

- accept one application for each rebate grant project;
- accept attachment of pictures, affidavits, and dealer quotes for the equipment being purchased;
- provide for automatic input and maintenance of the data and information in an Oracle database management system;
- verify required data and provide an initial evaluation by the system;
- enable review of the application by TCEQ staff;
- process and track the approval or denial of the application;
- provide for electronic signature or a hard copy signature by the applicant;
- provide for queries of the data and information;
- provide for automatic creation of reports and correspondence from the database system; and
- provide for automatic creation of grant contract documents and materials.

Existing Resources

There are two existing applications that offer similar Internet capabilities for application submittal and reporting of data: TexasOnline and the TCEQ's State of Texas Environmental Electronic Reporting System (STEERS).

TexasOnline is the state's electronic government portal administered by the Texas Department of Information Resources (DIR). The TERP Rebate Grant Program is currently listed on TexasOnline's e-Grants search list that provides a link to the TERP Rebates Grants existing website.

At the present time, the TexasOnline system does not offer the necessary capabilities to implement a Internet-based application process for the TERP Rebate Grant Program. In the spring of 2008, DIR will be developing a system for accepting basic grant application information on the Internet for use across state agencies. The actual capabilities and functionality of this system have not yet been developed and it is unclear how it would serve the needs of the TERP Rebate Program, or if it would meet EPA requirements. It is certain that additional analysis and adjustments would be required to conform to the specific requirements of the TERP Program and federal rules unique to the TCEQ. DIR has offered to include TCEQ, along with other state agencies, in the development of

this grant application program. TexasOnline does have the ability to authenticate users, enabling enforceable electronic signatures. TCEQ currently has access to the same authentication system for applicants that possess a Texas driver license. TexasOnline also provides authentication through a third-party system for residents of other states.

STEERS is the TCEQ portal for electronic reporting and permitting. This application in its current state can offer secure login, record searches, and user maintenance. Among other uses, STEERS currently accepts stormwater construction permits in a process analogous to what could be done with TERP rebate grants. Conventionally, stormwater permit applications consist of a one page application that is mailed to TCEQ along with payment and a permit is quickly issued. The electronic version accepts the application, receives the money, and issues the permit. The system has been designed to be flexible enough to allow other uses.

STEERS does not have the capability to accept pictures and other attachments. The TERP Rebate Grant Program requires that various supporting documents be included with an application. These include photos of equipment and price quotes from dealers. An additional function would have to be added to STEERS to allow it to securely accept such non-text information and link it to the application throughout the entire process. This necessary functionality presents new and complex challenges to STEERS. Creating a system that complies with EPA requirements while accepting photos and other attachments would also be challenging.

CROMERR

The EPA's Cross-Media Electronic Reporting Regulation (CROMERR) provides the legal framework for electronic reporting to the EPA and for state programs that are authorized and overseen by the EPA, such as the State Implementation Plan (SIP). In addition to providing a legal framework to facilitate electronic reporting, CROMERR is designed to ensure the legal enforceability of report documents. The TERP grant program is included in the SIP as an Economic Incentive Program strategy for reducing NO_x emissions. Therefore, an Internet-based TERP Rebate Grant Application would require EPA approval, certifying that it is compliant with CROMERR. This requirement and the EPA approval time frame may significantly affect project costs and timelines.

Oracle Database

The TERP Rebate Grant Program is one part of the larger TERP program. Implementing an Internet application for rebate grants cannot be examined outside the context of TERP's overall information technology strategy. An assessment by the Agency's internal auditors, information technology staff, and TERP program management has determined that the existing database does not offer the most robust security, version tracking, and Internet connectivity. Migration to Oracle, the Agency's preferred database platform, will address these issues. To implement an Internet-based rebate application, all of the existing and new information will need to be migrated to an Oracle platform. This migration will increase the security and stability of TERP data as well as enabling greater network functions. An Internet-based rebate grant application would have to be undertaken as one component of this effort and after the development of the Oracle system is completed and the data migrated. In addition, the security and audit-trail requirements of CROMERR would require migrating to Oracle.

Time and Cost Estimates

The time and cost estimates are contingent on implementing the Oracle database. Since a full-scale analysis of that process was not part of the scope of this assessment, an estimate of the total cost of implementing an Internet-based rebate grant application is difficult to determine. Preliminary estimates put the cost at \$500,000 for executing the Oracle database, plus ongoing annual costs for maintaining the system.

In addition to the time and resources to implement the Oracle database, it would take approximately eight to twelve months to develop the internal and external interfaces to include an Internet-based application process in that system.

The estimated rate for a contract developer with the necessary skills is not to exceed \$78.64 an hour. With the approximate 2,000 hours for 12 months (1 person year), the cost would amount to \$157,280 for the developer. This would be a one-time charge.

Also required for the project would be an analyst for documenting the application requirements and a project manager. It is assumed that both of these positions would be staffed by personnel from TCEQ's Information Resources Division. If resources were not available for the analyst, the cost of a contractor analyst for approximately three months to perform the analysis and document the requirements would be \$40,446 (501 hrs at \$80.73/hr).

Hardware and disk space would be obtained from the Texas Data Center. An estimated ten percent of an existing server could be used for this application at a monthly cost of \$69 for the server for this application. Disk space is charged at \$1.50 per gigabyte. Without further detailed analysis of the actual record size and attachment size, it is difficult to estimate the required disk space. For example purposes only, if 10 gigabytes of disk space were required, the cost per month would be \$15. More precise disk space estimates can be provided with additional detailed analysis. Both of these monthly charges would be for the life of the application.

The total cost of just the Internet-based application development component for the rebate grants is estimated to be between \$157,280 and \$197,726 with an additional \$1,008 in annual costs. This estimate is in addition to the costs of migrating the TERP data systems to an Oracle database.

The total time for developing the Internet-based application component is estimated at between eight and twelve months. Again, this process would need to take place as a supplemental part of the migration to Oracle, and after development of the main data components for the TERP program are started.

Other Limitations

This analysis does not assess how much time or resources could be saved by implementing an Internet-based rebate grant application process. Program staff processes most applications within two weeks. An Internet-based grant application would still require review by program staff, since many of the program criteria cannot be automated, such as the review of photographs and cost quotes. An Internet-based application would save the initial mailing time and could possibly streamline internal processes.

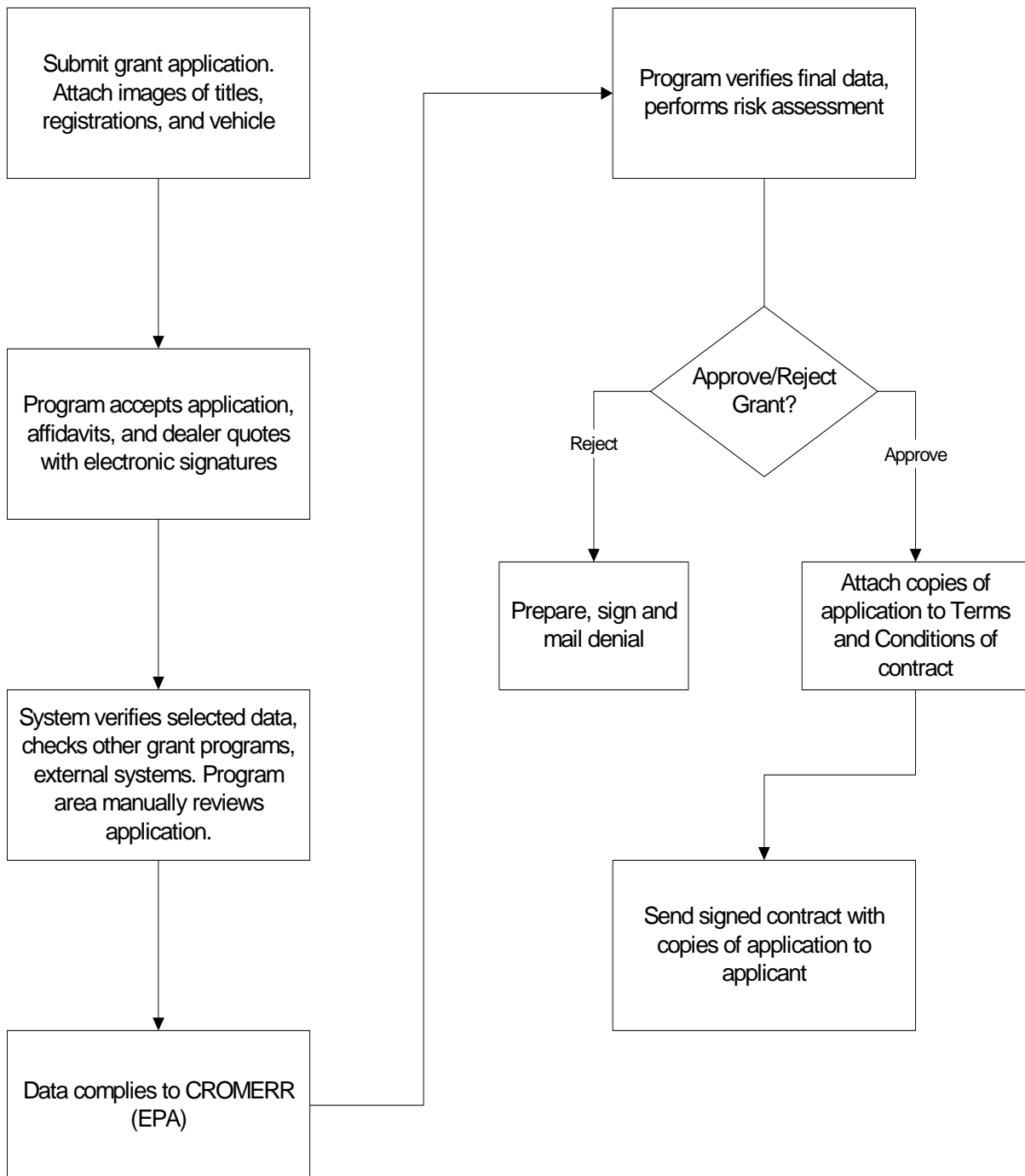
Also, regardless of the time and efficiencies that might be gained by an Internet approach, the current paper application process would need to be retained alongside the Internet-based system. Because of the nature of the rebate program applicants, Internet access and computer skills cannot be assumed for all participants. Making the application process only available online would limit access to the program for a large segment of the potential applicants for which the Rebate Grant Program was established. A dual-system approach might increase the complexity of the application process and the TCEQ's administrative work load.

It is difficult to estimate how many rebate grant applicants would choose to apply online. Participation rates in the online storm water permit system through STEERS are ten percent. If a comparable rate is assumed

for the rebate grants, based on the number of applications during the last biennium, 122 of the 1,222 rebate grant applications would have been submitted online. The benefits of using an Internet-based application system should be balanced against the cost and resources needed to implement the system.

Attachment 1

Internet Application Process Chart



Attachment 2

EPA CROMERR Overview



Office of Information Collection:

CROMERR Overview For States, Tribes, and Local Governments

Purpose

The Cross-Media Electronic Reporting Regulation (CROMERR) provides the legal framework for electronic reporting to the Environmental Protection Agency (EPA) and states, tribes, and local governments that are authorized to administer EPA programs. CROMERR is intended to reduce the cost and burden of electronic reporting while maintaining the level of corporate and individual responsibility and accountability that exists in the paper environment.

Background

EPA published a final rule on October 13, 2005, establishing a framework by which it will accept electronic reports from regulated entities. CROMERR could apply to any document submissions required by or permitted under any EPA or authorized program governed by EPA's regulations in Title 40 of the Code of Federal Regulations (CFR), if it is submitted electronically.

Under CROMERR, both new and existing electronic reporting systems require EPA approval. The regulation provides a framework for applying for, and obtaining such approval. EPA approval will be based primarily on an assessment of how authorized programs' electronic reporting systems meet performance-based criteria, which were included in the regulation. The criteria are technology-neutral so that authorized programs can determine the most appropriate technology for their program. In addition to including criteria for electronic reporting systems, the regulation also establishes an alternate approval process for such systems.

Current Activities

Under CROMERR, authorized programs that are currently, or plan to receive electronic reports may apply for approval of electronic reporting for one or multiple programs through one application process. When multiple systems are addressed in one application, the approval process is streamlined, providing for a single EPA review, with deadlines for EPA to take action on the application written into the regulation. Authorized programs may also choose to apply for approval of electronic reporting for a specific program by using the applicable regulatory program approval or revision processes under other Parts of 40 CFR.

How & When Does It Apply?

CROMERR Applies To:

- Persons or entities that submit electronic reports or documents to EPA.
- Authorized programs that receive electronic reports or documents.

CROMERR Does Not Apply To:

- Documents submitted by fax, magnetic media such as floppy disks, or optical media such as CDs.
- Submissions not under 40 CFR.

Compliance Date:

- New electronic document receiving systems must receive EPA approval before they begin receiving electronic documents.
- Existing systems must submit applications by October 13, 2007.

Once an application is received, EPA's first step is to review applications for completeness, a process that can take up to 75 days. Once the application is determined to be complete, EPA then has up to 180 days to approve or deny the application. However, EPA approval of applications for existing systems received after July 30, 2007, could take up to 360 days. The approval becomes effective when EPA publishes a notice of the approval in the Federal Register.

CROMERR is a performance-based regulation. The performance-based criteria used to evaluate electronic reporting systems address a number of topics, including, among other things:

- Criteria for establishing a copy of record
- Integrity of electronic document
- Opportunity to review and repudiate copy of record
- Validity of electronic signature
- Determining the identity of the individual uniquely entitled to use a signature device

Applications for approval of electronic reporting systems must contain:

- A certification, signed by the State Attorney General (or the chief administrative official in the case of tribes and local governments), that existing laws or regulations provide the legal authority to implement and enforce electronic reporting;
- A listing of the electronic document receiving systems for which approval is being requested and a description of how it will satisfy the requirements of CROMERR; and
- A schedule of upgrades that may affect CROMERR compliance.

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