



The Council of State Governments
Sharing capitol ideas.

2011 Innovations Awards Application

DEADLINE: MARCH 28, 2011

ID # (assigned by CSG): 2011- _____

Please provide the following information, adding space as necessary:

State: Colorado

Assign Program Category (applicant): Natural Resources (Use list at end of application)

1. Program Name

"eForm" (Oil and Gas Permitting Electronic Regulatory Form Filing)

2. Administering Agency

Colorado Oil and Gas Conservation Commission (COGCC)

3. Contact Person (Name and Title)

Mark J. Fine, Technology Services Manager (Governor's Office of Information Technology)

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cogcc.state.co.us

9. Please provide a two-sentence description of the program.

The application provides a two-way data electronic exchange between disparate state agencies and the oil and gas industry which files regulatory forms. The processing by the agency results in a paperless product being delivered back to the operator and being stored by the agency.

10. How long has this program been operational (month and year)? Note: the program must be between 9 months and 5 years old on March 28, 2011 to be considered.

Approximately two years (eForm went into production on April 1, 2009).

11. Why was the program created? What problem[s] or issue[s] was it designed to address?

Prior to implementing the program, Colorado's oil and gas regulatory form processing was a paperbound, labor-intensive effort. In addition, multiple agencies had jurisdictions over various aspects of oil and gas well siting and drilling procedures which frequently resulted in industry operators (operators) receiving duplicative submittals as well as agencies working at cross-purposes on occasion. Operators were increasingly clamoring for electronic forms submittal and processing and improved timelines for regulatory decisions. With the record-high number of permits operators submitted in 2008, the Colorado Oil and Gas Conservation Commission (COGCC) staff began demanding relief from paper-intensive processes as well.

Consideration also needed to be made to incorporate the legislative provisions in House Bills 07-1298 and 07-1341, which mandated new rules for oil and gas well siting and permitting to offer greater protections for Colorado's wildlife habitats and source waters and which gave the Colorado Department of Public Health and Environment a role in the permitting process.

An online, streamlined, and coordinated process for permit submittal with enforced regulatory review schedules was needed that would offer the following:

- Relief from duplicative oil and gas permit filing by operators to multiple agencies through a single online submission over a secure socket layer (SSL).
- Support to serve most types of regulatory data collection forms over the Internet.
- A rules engine that is configurable to adapt to changing rules.
- A review forum and automated workflow processing system to share data and to accept recommended conditions of approval input from sister agencies.
- The ability to track multiple regulatory clocks to ensure compliance with mandated permit review periods for permit applications and required supporting documents.
- Online public comment of permit applications under review.

12. Describe the specific activities and operations of the program in chronological order.

Program Development:

July 2007: The project team formed and consisted of members from three state agencies: the Colorado Department of Natural Resource's COGCC and Division of Wildlife (DOW) and the Colorado Department of Public Health and Environment (CDPHE). The team, led by COGCC, began to develop an application that allows two-way data electronic exchange between the agencies and the operators and that provides an internal user interface to coordinate the technical review of the applications among the agencies. The application development was done on a parallel timeline with state rulemaking activities.

Challenges to the project success included the immediate mandate to streamline permitting processes across multiple agencies to provide greater environmental protection. Without having the final rule requirements available literally until application go-live time, the competing needs for information technology development, rulemaking processes, agency business process coordination, and industry outreach resulted in a nearly crushing project execution timeline. A strapped state budget also left portions of the mandate difficult to fund. The manner in which COGCC worked through these difficulties resulted in a coordinated permit review process that crosses regulatory jurisdictions and a reusable code base that other agencies are now using nationwide.

October 2008: While the project was still in active development, the GWPC put into effect a multiple state training program to teach oil and gas agency database administrators how to use and manage eForm. Additional training events were held in May 2009, October 2009, and April 2010 during meetings of the Ground Water Protection Council's (GWPC) national membership. Additionally, in November 2009, an *eForm Administrator's Manual and Training Guide* was made available.

<http://www.rbdmsonline.org/downloads/Training/eFormGenericAdminHelp.pdf>

April 2009: Due to a flexible design, an innovative approach to funding through partnership with the GWPC, interagency coordination and cooperation, and agency outreach to train operators in its use, the eForm web application (<https://cogcc.state.co.us/eform/>) was launched on April 1, 2009, the date the new rules went into effect. eForm was readily embraced by all stakeholders; six months later, COGCC was receiving 80 percent of new permit applications through eForm. eForm has reduced the time agency staff spend to review and process a permit application from 55 days during the heaviest volume to just over 30 days.

Program Operations:

The eForm program is role-based and easy to use. After a user logs on using their unique credentials, a dashboard is displayed which includes a specific set of options based on the user's role. eForm contains a number of modules for use by state agency staff including a notification module that sends out emails to industry agents upon receipt and approval of their documents, to internal staff at assignment of tasks, and to interested parties on permit approval for notification of approval. Another module allows staff members to create a tickler file tied to a specific regulatory document. Upon approval of the permit, the application creates a PDF version of the data, creates an email notification to the operator, and sends the PDF and any additional polices or documents the staff has requested be included to the contact name on the permit. Staff can also access a problem reporting module which allows them to report problems with the system. The overall process works as follows:

Step 1 Oil and Gas Industry Requests a Permit

Operators have two options when requesting a permit:

New Form option: When creating a form for the first time, the program will remember data entered in certain common fields and pre-populate those fields in subsequently created forms. As the agent enters data, s/he can validate it at any time against the rules, upload documents or other attachments, and/or save the form and come back to it at any time within the next 45 days. The agent can continue to modify the form until such time as it is submitted. At the time of submission, the task and staff member are assigned to review the form.

Existing Forms option: When this option is selected, the dashboard will display a listing of all of the documents within the application based on the last set of search parameters the agent used. The program allows the agent to search for single or multiple documents using different parameters. The agent can review the Attachments, see if there are any Public Comments for Permits, or view and/or print a PDF image of the Form from the current data entered on the form. The Agent can track the progress of regulatory reviews on the dashboard by checking the status of each task that is assigned to the document.

By allowing the operator to submit digital documents, an increase in productivity has been achieved along with reducing the amount of paper stored.

Step 2 State Agencies Options/Review Process:

- **Oil and Gas Commission:** Staff has a variety of functions available to them including, but not limited to: 1) locating and viewing documents or associated information such as task status, public comments, etc., 2) entering data including comments and conditions of approval, and 3) passing the task in the approval process of the regulatory document.
- **Division of Wildlife:** Staff is electronically notified when a permit is located within a designated area that requires review. The staff review includes all of the information provided with the permit to ensure all of the wildlife requirements are met. The staff can add recommended conditions of approval to the permit, which are then reviewed by the Director of the COGCC for inclusion in the final approved permit. This process of review happens at the same time the COGCC staff is working on their review. The Wildlife staff have a separate module to work in that is not affected by the work of any other state employee.

- Public Health and Environment: Staff is electronically notified when the requirements are met within the rules for consultation regarding public water. This process of review happens at the same time the COGCC staff is working on their review. The Public Health staff have a separate module to work in that is not affected by the work of any other state employee.

13. Why is the program a new and creative approach or method?

eForm’s streamlined and paperless process allows oil and gas operators to file a superset of information required by three state agencies as a one-time submittal. Some of the creative aspects of the program include:

- Innovative Project Funding:** The commitment of Department of Energy funding through the Ground Water Protection Council (GWPC), a national association of state ground water and underground injection control agencies, was instrumental in allowing the project to be approved by the Governor’s Office of Information of Technology. With this support, COGCC was able to accomplish better interagency communication at a lower overall cost. As of April 1, 2010, approximately \$140,000 of Department of Energy (DOE) funding has been committed to the project, offsetting the state’s contribution of \$257,700.
- Ability to Share Data Across Disparate Agencies:** eForm is configured so that industry provides a single electronic submission of permit data. The COGCC, DOW, CDPHE, and various local government designees can then review the submitted permits and location documentation to coordinate recommended conditions of approval. This elimination of duplicative data entry and storage greatly improved the efficiency of the permitting process and the coordination and better use of data among the agencies results in greater protection of Colorado’s environmental resources.

The screenshot shows the Colorado ePermit web application. At the top, there is a search section for an existing application with fields for Operator (0), Status (In Process), Form No. (All), Doc # (1759298), Start Date (6/30/2009), and End Date (10/2/2009). Below this is a table with columns: Doc ID, Form, Status, Opr Num, Company Name, Created Date, Status Date, Tasks, Attachments, Comment, and View. The first row shows Doc ID 1759298, Form 02A, Status IN PROCESS, Opr Num 100185, Company Name ENCANA OIL & GAS (USA) INC, Created Date 9/18/2009, Status Date 9/27/2009, and 0 tasks. Below this is a detailed task list table.

Task	Due Date	Assigned To	Reviewer	Status	Status Date
CDPHE		KUSTER, KENT		Pass	9/27/2009
Completeness		AHLSTRAND, DENNIS	COLER, LARRY	Pass	9/27/2009
DOW		GREENMAN, CELIA		Pass	9/27/2009
Final Approval	12/11/2009	NESLIN, DAVID		Active	9/27/2009
LGD	10/17/2009	BARKER, BRUCE T.		Active	9/27/2009
OGLA	12/11/2009	Halstead, Mary		Active	9/27/2009
Operator			JEVIN CROTEAU	Pass	9/27/2009
Permit	12/11/2009	FISCHER, ALEX		Active	9/27/2009
Public	10/17/2009	FINE, MARC		Active	9/27/2009
RCOA	12/11/2009	KERR, THOM		Active	9/27/2009

Figure 1: COGCC's eForm centralizes the data multiple agencies need for permit review and approval, including attachments, recommended conditions of approval, and other notifications.

- Code-Sharing Value:** The program’s code-base can not only be shared within the state of Colorado between the agencies and the regulated industry operator but also nationally through COGCC’s partnership with the GWPC and its member-state oil and gas agencies. This multiple-state rollout was made possible through the GWPC’s code-sharing and training policies, features of its Risk Based Data Management System (RBDMS) e-Commerce Initiative, a program that has been ongoing since 1996 and is now serving 22 agencies nationwide through the GWPC’s administration of DOE grant funding.

- *Greater Transparency:* Members of the public can directly query the agency's web database to view and comment on permit applications that are under active review. After passing through moderation, the comments are displayed on the web site with the permit in a manner similar to blog entry discussions. Oil and gas operators, as well as the public, can track the status of permit applications and discussion through the public pages of eForm. The same code that is used for the Internet is also used for the Intranet that allows the staff at the COGCC to review and approve regulatory permits and other documents. The difference is controlled by configuration files; user access is role-based and controlled through a standalone program.

14. What were the program's start-up costs? (Provide details about specific purchases for this program, staffing needs and other financial expenditures, as well as existing materials, technology and staff already in place.)

Through a partnership with GWPC, the COGCC was able to design and develop the first release of eForm in April 2009. The cost was split with approximately \$250,000 coming from Colorado and \$150,000 from GWPC. The participation of the GWPC was funded by DOE to help further the development of electronic permitting in all Oil and Gas states. The costs were related to design and development of the application, some new software for the database servers. The majority of the development was undertaken by contractors. The development was in Silverlight. In the last year of the project, one state FTE at three-quarter time was dedicated to the project to assist with the integration with the Colorado Document Management System, and other aspects of the Colorado environment.

15. What are the program's annual operational costs?

Approximately \$67,600 - the fully loaded cost of having one FTE dedicated to support of the system.

16. How is the program funded?

The COGCC funds the program fully through its operating funds.

17. Did this program require the passage of legislation, executive order or regulations? If YES, please indicate the citation number.

This program resulted from a combination of a needed replacement for a back office program and the result of legislation (HB 07-1298 and HB 07-1341) requiring the COGCC to review and rewrite their rules.

18. What equipment, technology and software are used to operate and administer this program?

The application architecture consists of an integrated set of server tools that are based on a Silverlight Web client. The system runs on Internet Information Services (IIS) 6 in a Microsoft Windows Server 2003 environment on a virtual machine. The database is SQL 2008 SP2. eForm is accessible via Internet Explorer 7 or higher, Firefox, or Safari.

With its decoupled rules engine, forms designer, and security components, the eForm application is a reusable tool that other state agency database administrators can use to manage data collection over the web without outside help from consultants.

19. To the best of your knowledge, did this program originate in your state? If YES, please indicate the innovator's name, present address, telephone number and e-mail address.

Colorado was the lead state in its development and is the first state among the GWPC group to run eForm. The "innovator's name" is the entire development team and not a specific individual. You can contact them through Marc J. Fine, 1120 Lincoln Street, Suite 801, Denver, CO 80111, 303 894-2100 ext 5140, marc.fine@state.co.us.

20. Are you aware of similar programs in other states? If YES, which ones and how does this program differ?

Nebraska has a version of eForm running; however, their version is used to collect completion reports only at this time. The Alabama State Oil and Gas Board are in development to start using eForm for filing permits.

21. Has the program been fully implemented? If NO, what actions remain to be taken?

The program has been fully implemented and the COGCC is working on implementing additional regulatory forms this year. The goal is to implement all of the forms that are required by the COGCC in eForm by the end of 2013.

22. Briefly evaluate (pro and con) the program's effectiveness in addressing the defined problem[s] or issue[s]. Provide tangible examples.

Success indicators include: 1) its immediate acceptance and use by Colorado's stakeholders, 2) decrease of processing time by three days, and 3) its adoption for use by GWPC member-states.

- One of the program's primary requirements was to provide the ability for different state agencies to review, comment, and approve or deny permits in a defined time period and without having to see any paper. COGCC, DOW, CDPHE, and relevant local government designees can now review the oil and gas well permit applications and location documentation submitted by operators and then recommend conditions of approval. This elimination of duplicative data entry and storage greatly improved the efficiency of the permitting process. Another requirement was to provide a process for public comment on permits. This presented a difficult challenge since all comments would be seen by others. The program design includes manual review of permits for acceptable language and then posting to the public site. The final design requires a number of passes of data between servers to accomplish the end result.
- A major concern of the COGCC during the design of the application was the tracking of industry users. With over 600 operators in the state, a method was needed where each operator would be responsible for their own users. It was therefore important to develop rules and processes that would maintain a level of system security so that only users from each operator could see documents for that operator. To accomplish this and keep track of the users assigned to each operator, the user had to be assigned to the operator number. To keep track of this, a special role was created. This role was the *Industry Administrator* who was responsible for who had access to the operator's information. This role creates and deletes users for that operator. A COGCC administrator creates an Industry Administrator.

23. How has the program grown and/or changed since its inception?

More regulatory forms have been added, with each new form gaining the same acceptance as the permits in about six months. Internally, a number of enhancements were added to help facilitate the processing of documents, most having to do with the lack of a piece of paper being present.

24. What limitations or obstacles might other states expect to encounter if they attempt to adopt this program?

- There is a learning curve in developing the forms within the system, but a .NET developer should be up to speed within a couple of weeks. As with most software like this, there is the need to customize for each individual installation, which will require upfront analysis to ensure a good start.
- Perhaps one of the most difficult challenges we faced in moving to a paperless office environment was changing the ingrained office culture. An unexpected result was a temporary increase in print costs as the staff adapted to the new environment. Even so, this type of change offers any agency the opportunity to look at how they are doing business and to effect positive change.

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2011 Innovations Awards Application Program Categories and Subcategories

Use these as guidelines to determine the appropriate *Program Category* for your state's submission and list that program category on page one of this application. Choose only one.

Infrastructure and Economic Development

- Business/Commerce
- Economic Development
- Transportation

Government Operations and Technology

- Administration
- Elections
- Information Systems
- Public Information
- Revenue
- Telecommunications

Health & Human Services

- Aging
- Children & Families
- Health Services
- Housing
- Human Services

Human Resources/Education

- Education
- Labor
- Management
- Personnel
- Training and Development
- Workforce Development

Natural Resources

- Agriculture
- Energy
- Environment
- Environmental Protection
- Natural Resources
- Parks & Recreation
- Water Resources

Public Safety/Corrections

- Corrections
- Courts
- Criminal Justice
- Drugs
- Emergency Management
- Public Safety

Save in .doc or rtf. Return completed application electronically to innovations@csg.org or mail to:

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This application is also available at www.csg.org.