

CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC)

Energy Efficiency Groupware Application (EEGA)

Background & Challenges

CPUC is the primary regulatory body for overseeing utilities across California. One of its roles is the regulation and oversight of all energy efficiency programs across California. To fulfill this role, CPUC works closely with the major independently owned utilities (IOUs).

EEGA was deployed in 2004 for the CPUC's Energy Division as a solution to their reporting and document management problem for energy efficiency programs across California. The CPUC required processing detailed information from 190 programs across California, including comprehensive progress reports with thousands of data items and supporting documents. They needed an application that could help them manage workflows associated with report submission, approval and archival. When reporting frequency increased from quarterly to monthly, it became increasingly challenging to manage the complex workflows related to documentation, reporting, and communication. The challenges included: (a) exchange of information via emails with large attachments was ineffective; (b) monitoring, approving, and overseeing workflow via phone and email became cumbersome and left no auditable trail; and (c) consolidation of data spread over thousands of documents for analytical reporting became difficult. Comprehensive analytical reporting capabilities were required to assist in CPUC's regulatory reporting to meet their oversight responsibilities. The stakeholders (including CPUC, investor-owned utilities, and program implementers) involved in managing and implementing the energy efficiency programs were geographically dispersed, possessed varying degrees of computing skills, had wide ranging primary responsibilities and yet were tasked to meet regulatory reporting requirements. To add to the complexity of the problem, the IOUs were using proprietary formats for reporting.

During the requirements analysis stage, the team discovered that the workflow processes, security requirements, and user-centric features were more complicated than initially envisioned. Use of an Excel-based data collection process was a stumbling block for input control, data integrity, and validation.

Solution

CPUC chose Intergy to help manage the entire requirements analysis, development and deployment of EEGA.

The solution was developed using Microsoft .Net, while innovatively integrating Crystal Reports, SQL Server Database, IIS Web Server, XML, custom web-interfaces and analytical components, and deployed on Microsoft Server 2000. Key features included:

Dashboard: User-friendly interface for relevant user-specific tasks, organization-wide tasks, workflow status, document access through directory explorer and keyword search, with an auditable trail of historical actions.

Workflow Engine: EEGA automates business processes including report submissions, email alerts and reminders, data extraction, and reports generation utilizing a workflow engine.

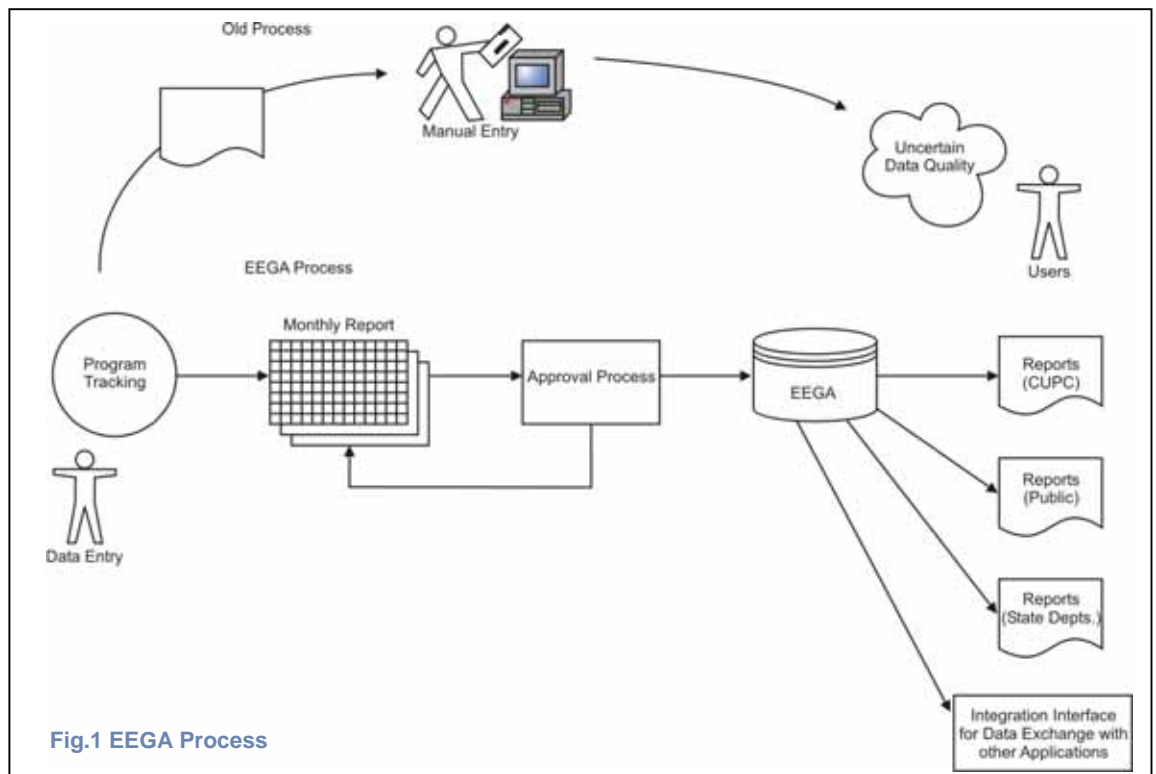


Fig.1 EEGA Process



Versioned Document Storage: Incoming documents are organized in hierarchical directories with naming conventions and version control.

Reporting Engine: Web-based reports based on user-defined data filters and security privileges; allows printing and multiple format sharing (Excel, PDF, HTML, Word).

Security: Single-sign-on and database authentication, access control with user roles, multiple firewalls, and real-time virus protection.

Data Storage: RDBMS stores critical programs information; multiple databases coexist allowing easy integration/information sharing.

Online Collaboration: Users collaborate and communicate using EEGA; features include email, task monitoring and delegation, and ability to put comments with appropriate levels of privacy.

Administrator Functionality: Administrator can configure business rules without code changes, change "flex-field" labels to capture new data, and upload document templates.

The product went live with 50+ organizations and 125 users during the first month. The next phase of the product involved a design extension to facilitate additional analytical reporting and the possibility of integration with other applications. Each month upwards of 800 documents are being uploaded to the application and more than 400 workflow processes are being executed.

Benefits

By providing customized user-centric functionality, EEGA automates information flow and business processes, and provides easy and secure access through an online interface. Each step of the process is documented and next steps, such as receipt notification, are automatically triggered. This has hugely reduced the effort needed to monitor and track progress, minimized possible mishaps or human errors, and users no longer play phone tag or search through numerous emails to manage workflow.

Key benefits are as follows:

- Standardizes the mechanisms to securely submit, verify, approve, and record program plans and reports for the CPUC, the publicly-owned utilities, and program implementers spread throughout California;
- Organized repository of documents, program information, and expenditures in a searchable format;
- Common platform with customized functionality for stakeholders that are geographically dispersed;
- A scalable, flexible architecture that adheres to standards to accommodate future requirements and technology developments; and
- Stakeholders can access, share, and analyze extensive program tracking information to further refine energy efficiency programs and realize greater energy savings.
- CPUC can track energy efficiency programs and instantaneously communicate key program performance statistics accurately and expeditiously to stakeholders including the CPUC, State Legislature, program managers, and the public. EEGA helps the Commission produce analysis-based reports (like statewide energy efficiency programs Cost Benefit Analysis reports), support long-term decision-making strategy, and ensure that estimated statewide energy savings are realized.

EEGA was selected by InfoWorld magazine as one of the 100 most innovative IT solutions in 2004. EEGA is available at <http://eega.cpuc.ca.gov>. For more information, please send an email to eega@intergycorp.com.

I have been very impressed with the depth and breadth of knowledge of the Intergy team. Over the last year, they have helped my group in the process of developing a high-quality, very cost effective solution (Energy Efficiency Groupware Application, EEGA) to help us comprehensively manage the IOU and third party programs from proposal submission, management of data from the proposals being submitted, and the entire reporting and processing of the monthly reporting for the duration of the programs.

- Tim Drew, Program Manager, CPUC

I'm very pleased with the professionalism and thoroughness of their work. Their team's systems expertise has been invaluable and well-suited for the project, and their project management skills have helped to keep a multi-party effort on its aggressive and evolving schedule. They are pleasant colleagues, flexible when the requirements change (as they have several times in this project), and quick to respond to requests. I would be very willing to work with them again on other projects in the future.

- Pierre Landry, Program Manager, Southern California Edison



EEGA was selected by InfoWorld magazine as one of the 100 most innovative IT solutions for the year 2003

