



## SPEx Summary: Leveraging Product Databases

20 November 2014, 11:30–13:30 GMT

### Highlights of the discussion

- Policy makers from nine countries joined in the first SEAD Policy Exchange Forum call.
- The call featured four presentations on the Chinese, Indian, Australian, and US Energy Star online product databases and consumer smartphone applications (detailed descriptions below).
- Participants shared information regarding projects and databases currently under development and were able to glean useful insights that could help inform the development of these ongoing activities.
- There are many different databases currently in use, most of which do not feature information or data from other countries. However, there is interest in accessing foreign product data information to help provide market comparisons to inform policy development.
- In support of their smartphone app development, India is designing an application programming interface (API) with a data standard that is based on the SEAD Data Access Framework. The API would be universal and could be applied to different mobile applications as well as product databases in other regions, which could facilitate sharing of data between different markets.
- The Australian product database and mobile app currently covers the national market, as well as New Zealand's. The scope of the database could be extended to cover other regions among the Pacific Islands.
- Sweden is working on a project to compare purchased sales data and web-scraped data.
- There was general interest to explore sharing source codes/software for different applications.
- Key challenges to developing effective databases include:
  - Minimizing the costs of database creation and maintenance through sharing software and source codes, automated updating (distinguishing between current and obsolete models was a common challenge), and other activities;
  - Establishing legal and justifiable mechanisms to fund databases, for example through registration fees, government financing, or private financing; and
  - Maximizing the usage potential of these databases to inform distributors/retailers, consumers, researchers, policy makers and program administrators/compliance officers.

### Summary of Country Presentations

**China:** The China Energy Label Database covers 28 different product categories and 520,000 models, with data attributes that include information on the manufacturer, model number and energy efficiency or consumption. No sales or pricing data is included in the database. The database is used by manufacturers, government officials including MV&E staff, researchers and in some cases consumers. The key challenges include making continuous updates to the data by removing obsolete product models from the database; and handling the increasing size and usage of the database, as well as the number of queries that may result from introducing a consumer mobile app and QR code on product labels. The database is available at:

[http://www.energylabel.gov.cn/NewsMore.aspx?para=uncc\\_bagg](http://www.energylabel.gov.cn/NewsMore.aspx?para=uncc_bagg), however it is not available in English.



**India:** The Bureau of Energy Efficiency Star Label Database contains information for 19 different product categories, requiring either mandatory or voluntary labels. Manufacturers must register their products for a fee and must provide product data for products covered by the mandatory Star Label. For voluntary product categories, manufacturers that choose to display the label on their products must also provide data for the database. The database enables consumers to compare different products available on the market. In addition, India is developing a new smartphone application for use by consumers to increase awareness of S&L and energy efficiency in India and to inform smart purchasing decisions by allowing consumers to compare products and understand the energy and cost savings they may achieve. The tool will also encourage consumers to report inaccurate labels they see in stores, which will support compliance as well as the design of the Star Label programme. For more information, see: <http://beestarlabel.com/>

**Australia:** The Equipment Energy Efficiency (E3) Program is a joint program in Australia and New Zealand. The E3 website contains detailed information on energy efficiency and star label ratings for a range of registered residential, commercial and industrial electrical appliances and products that carry an energy label and that are covered by minimum energy performance standards. The website enables consumers to compare products and choose the most energy-efficient appliances, as it contains exact product model information. The data does not provide sales information, but the information is accurate, in part because registrants can update data in the system. In addition to the web tool, the E3 program has developed an Energy Rating App, which is available across a variety of mobile platforms. The smartphone app is the first of its kind to display power use over the life of an appliance in dollars, rather than kilowatt hours. It shows people what the energy rating means financially, so they can understand the cost savings involved in their purchase. For the database, see: [http://reg.energyrating.gov.au/comparator/product\\_types/](http://reg.energyrating.gov.au/comparator/product_types/) and download the App at:

- [iPhone users - download the app from The App Store](#)
- [Android users - download the app from Google Play](#)
- [BlackBerry users – download the app from BlackBerry World](#)
- [Windows Phone users – access the web app](#)

The E3 Program is also working to make the product data available in its database available through an API to retailers so they can use it on their websites.

**United States:** The ENERGY STAR Products Database includes products and performance information on more than 45,000 models from over 70 product categories. Third party certification organizations provide the data to the US Environmental Protection Agency (EPA), which makes it publicly available at <https://data.energystar.gov/> in a variety of different formats, including Excel and an API. In addition to powering EPA's own search tool for ENERGY STAR products for use by consumers and utilities, the data is also widely used by energy efficiency program implementers who need to confirm which products are eligible for promotions. EPA and other efficiency programs also use the database to inform specification development and marketing efforts. The main area for improvement is the addition of more model-identifying information that would make it easier for program implementers to match models and allow EPA and other organizations greater ability to access images, cost, and location information on the products.

### Other Relevant Activities

- Swedish open source application for smartphones, Lampguiden, a guide for choosing energy efficient lamps: <https://lampguiden.codeplex.com/>
- EU Database currently under development
- List of existing databases available at: <http://www.superefficient.org/dataaccess>



## Questions and Answers:

**1** *How is a product 'model' defined, and are 'equivalent models' treated in the same way?*

This is the most challenging aspect of databases, but many have experience in this area, such as Energy Star, which can offer advice.

**2** *Does the Chinese Database include price and sales data? Which data is made public and which is kept private?*

The database does not contain pricing or sales data. Only the product attributes that are referenced in the standards are available publically. Manufacturers must provide some more detailed information when registering their products that is not made public.

**3** *Is there a registration fee to include products in the Indian Star Label Database, and does the price differ between mandatory or voluntary labelled products?*

Manufacturers must pay a registration fee, which is the same amount for all products.

**4** *With the Indian Smartphone App, what purpose will consumer feedback serve, and will it serve as a compliance tool?*

The feedback sent in by consumers may be used for compliance and enforcement purposes, but will also enhance our ability to evaluate and improve the BEE Star Label Programme.

**5** *Will the Indian Smartphone App use the camera feature of the phone, and are there plans to use optical character recognition software?*

The app will allow consumers to scan QR codes on the Star Labels, however there are currently limitations for smaller industries that may not have the technology available to them to print the codes. There is a technology in the works that would enable consumers to take a picture of an energy label, and through optical character recognition software, the label would be linked back to the relevant database. This would eliminate the need to add QR Codes to labels.

**6** *Will the Indian Smartphone App enable comparisons on data from other countries?*

This will not be included in the Indian app, as the app is targeted to consumers in India and their focus will be on products available on the Indian market. There is potential to include information from other regions in the Star Label online portal. The smartphone app will use an API based on the SEAD data access standards to retrieve data from the underlying database. This API could be applied universally and could be used in different country tools, allowing for easy comparison of country data.

**7.** *What information do manufacturers need to submit in terms of stock and sales data in India, when registering their products in the database?*

Each year manufacturers must submit data on the number of units of each individual product model produced in the previous 12 months. While this information is not publically available, BEE analysts can use it to estimate sales at the model level for the products in question.

If you have any questions to the presenters or to other country representatives, or would like further information, please contact Nicole Kearney, the SPEX Coordinator at [nkearney@clasponline.org](mailto:nkearney@clasponline.org).