Behavioral Programs in Brazilian Utilities: Paving the Way for New Prospects

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Brazilian scenario

We’ve identified four main issues, which are driving raise of consumption, mainly in households – from December/12 until today.

1) **Rising socioeconomic development** of D and E social classes;

1) **Cutting taxes** on electricity bills;

1) **Increased climate variations** (especially summer);

1) **Popularization of new products** and technologies and its demands for energy.

Available at: [http://mercadoetico.terra.com.br/arquivo/por-que-estamos-consumindo-mais-energia/](http://mercadoetico.terra.com.br/arquivo/por-que-estamos-consumindo-mais-energia/)

Brazil “**Energy Efficiency Program**” demands utilities to invest 0,5% p/y; Historically, Brazilian utilities go to **exchanging incandescent light bulbs** as the flagship action on spending these funds. Since May/14, incandescent light bulbs were **banned**, bringing up new questions (and perspectives?). Payback relation LED X CFL are positive after 7,5 years – there are 2,5 years left for make it worth...
Brazilian scenario

- Brazil is passing through its worst drought ever;
- Hydroelectric power plants are responsible for **76.9 %** of the electricity produced in the country;
  - The main potential is located in the North, but it competes with the environmental lobby, plus the raise of transmission costs;
  - In the Southeast, the situation is critical – where most of population is placed;
- The reservoirs levels are 16.15 % in the Southeast / Midwest and 63.92 % in South (updated until November 30);
- Brazil has a potential $20 billion of savings in EE, and in the potential of savings in the households is equivalent to 13.64 TWh / year.

Cantareira reservoir has only 10% of it’s total capacity (it supplies São Paulo city area).

HomeCarbon Strategy

Individual

Events
Social Networks (blog, facebook)
Visual displays (posters)
Local media actions
Pro environmental contents and brochures
Integration with schools, neighborhood actors
Adoption of efficient appliances (motivation)
Leadership: Children and adults
Integration between families (good practices)
Directed actions HomeCarbon

Family

Behavioral

Education
HomeCarbon® Program

Sample: a total of 500 low income households involved in one year, divided into three groups;
Approach: intensive door to door visits (1 p/m), added to community engagement, such as events, school actions, partnerships with community stakeholders, development of local leadership and IT tools. Storytelling, leadership development (adults and kids) are a must – provide sustainability to the program.
Learnings

**Key issues:** to establish connections with the community, granted through the presence of the intervention team on site, plus the real time feedback IT tools used in action. **Operational versatility:** the program cooperated with another EE actions (light bulbs included) and it can be used in a range of other value actions for utilities, not only EE.
Results

Quantitative:

Consumption trend:
- BR;
- Minas Gerais state;
- Sete Lagoas city;
- HomeCarbon sample;
- its trend (if project wasn’t done);

We made 10% in the year, with about 15% projected (for next 12 months).

Qualitative:
- Construction of new consumption culture: the project was successful to raise awareness;
- It also helped the development of a corporate image.
The goals were to (1) reduce about 10% the consumption of electric energy using behavioral approach, (2) mitigate delinquency and irregular consumption (frauds in grids) and (3) deliver a concrete social action.

- We reduced in general 10%, with the prospect for 12 next months of up to 16%
- It is possible to achieve long-term and sustainable changes in energy consumption habits;

Students of Sete Lagoas/MG, in a parade through their neighborhood.
Results

• Saving money is still the biggest motivation for engaging in change of habits, and through this experience residents realized it was possible to save (energy and money) by changing their behaviors. After the realized savings, environmental and social awareness rose up;
• To build trust and connection with the communities was a key issue for success.
Takeaways

• In Brazil context, programs like HomeCarbon should be evaluated not by the direct savings it delivers; better than that, for how much it prevents consumption to raise;
• There is room for an articulated work between operators which develop behavioral actions (or are longing to) in order to ease regulatory issues and encourage utilities to diversify their programs portfolio;
• Programs like HomeCarbon can be highly cost effective, if combined with other EE actions;