Evaluation of Policies to Reduce Standby Power -Development of a Standard Methodology

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Focus of Report	This report proposes a uniform methodology to assist policy makers evaluate the impact of standby power initiatives. The methodology is designed to encourage policy makers to use a common approach when conducting evaluations, allowing greater transparency, affording international credibility and providing opportunity for comparisons across programs and jurisdictions. The methodology is presented as a set of options or tools that can be applied depending upon the type of programme being implemented and the level of rigour required by the user. This includes recommendations for establishing a baseline during development and evaluation after implementation.
Description of Research	A desk study was conducted that combined generic evaluation theory with knowledge of existing standby policies to create a 10 step methodology to conduct an impact evaluation.
Key Findings	The evaluation methodology has been designed so it can be used at all stages of programme development including determining the objective of a programme, providing the rationale for a program and evaluating the impact of a program after implementation. The evaluation method determined that, in the case of standby power, calculations should assume a "natural replacement" environment where the programme doesn't influence the decision of *when* to purchase but influences the *type* of purchase the consumer makes. The report articulates that in the case of standby power it is unlikely that any programme would stimulate early replacement i.e. bring forward purchase, as individual savings are too small. In evaluating the impact of standby power initiatives, the report identifies the diversity of low power modes and the wide variety of products covered by standby power initiatives as the main challenge for evaluators. It is important to establish clear and consistent classification and definitions of modes and products in both design and evaluation stages. The ten steps proposed for evaluating standby power initiatives are: **Step 1 – Identifying Products Categories and Types** ➢ Determine which products are to be included in the evaluation. ➢ Consider applying the basket of product approach to have a normalised data set that can be compared to other jurisdictions. **Step 2 – Defining Product Power Mode** ➢ Determine which product low power mode will be included in the evaluation. ➢ Consider in priority the active standby, passive standby and off-mode. **Step 3 – Determining the Quantity of Products Sold in a Market** ➢ Determine the total number of products sold in the market for each product.

	➢ Obtain data disaggregated by brand and model if possible. **Step 4 – Defining Baseline Energy Consumption** ➢ Estimate trend in low power level including autonomous improvement. ➢ Collect or measure information about average power of products in each mode. ➢ Calculate the model sales-weighted power average, the brand- weighted average or the simple arithmetical average of all products. ➢ Estimate or measure the number of hours of operation in each mode. ➢ Calculate the resulting energy usage in the modes for the baseline scenario. **Step 5 – Defining Standby Policy Initiative (SPI) Scenario Energy Consumption** ➢ Repeat step 4 as applied to SPI scenario. ➢ Calculate the resulting energy usage in the modes for the SPI scenario. **Step 6 – Calculating Gross Energy Savings** ➢ Calculate the gross savings from the difference between the baseline and the SPI. **Step 7 – Estimating Savings over Product Life** ➢ Estimate or obtain data about the expected life of each product. ➢ Calculate energy savings over the product life. **Step 8 – Determining Attribution to the SPI (optional)** ➢ Evaluate the proportion of the gross savings attributed to the SPI compared to other programmes or initiatives implemented nationally, regionally or globally. **Step 9 – Evaluating Distortions Effects (optional)** ➢ Evaluating cross-effect. ➢ Evaluating free-ridership if the SPI is a resource acquisition programme. **Step 10 – Net Impact Evaluation** ➢ Apply the net-to-gross ratio and the attribution ratio from the previous steps to the gross savings to determine the net savings. For each of these steps the methodology provides "a recommended base approach" which is the option judged as the most cost effective and most applicable to the types of programmes commonly implemented to tackle standby power. Additionally the report provides descriptions and tables listing evaluation tools appropriate for each step with a rating of the 'rigor' that they will provide and comments about its applicability.
Conclusions	The methodology highlights the challenges and complexities of evaluating standby power. It provides an in-depth review of the different approaches from which the reader can extract the elements that are relevant to their jurisdiction. The report provides a ten step evaluation plan complete with appropriate definitions and tables that assess the rigour of various tools including comments highlighting issues faced in using the tool and the benefits of the tool.
Standby power policy Implications	The evaluation methodology provides policy makers with the tools required to comprehensively evaluate the impact their programmes are having on reducing the energy wasted by products in low power modes. By using the steps laid out in this report, policy makers can have confidence that evaluations of their programmes will hold up to external scrutiny. This methodology also advances global cooperation in the area of standby power policy by providing a generic tool that can be applied globally with enough flexibility to cater to the needs and requirements of individual users/jurisdictions.