- Finally, the resulting incentive level was reviewed and, in some cases, manually adjusted based on information from actual field experience, other utilities' program experience, the EMV contractor's input, and market conditions.

An example of a manually adjusted incentive is LED bulbs in the Residential Lighting program. Steps 1 and 2 above would have set the incentive level between 20% - 30% of incremental cost. A comparison of the broader market and input from the implementation team, however, caused Ameren Missouri to increase its LED incentive in the first program year to $15, or approximately 45% of the incremental measure cost. This more accurately reflects market conditions.

Another exception to the above methodology is when an assessment of market needs dictates that full measure cost or direct installation of measures must occur. This is the case in programs such as Low Income.

Specific incentive levels are available in the program templates and appropriate program Batch Tools.

Calculation of Administrative Costs

Portfolio Administrative Costs were calculated on a per-measure basis. These administrative costs were determined as a percentage of incentive costs. The administrative costs differed from program to program, but for the overall portfolio, they ranged from 75% – 85% of the incentive costs from year to year.

Portfolio Level Cost Estimates

There are 4 Portfolio Level Costs applied on a per-program basis: Portfolio Administrative Costs, EMV Costs, Educational Costs, and Marketing Costs. Each cost was calculated by applying the following percentages to the Total Program Costs:

Table 3.23 Portfolio Level Costs*

	% of Total Program PY 1 Costs*	% of Total Program PY 2 Costs*	% of Total Program PY 3 Costs*
Portfolio Admin Costs	6.0%	6.0%	6.0%
EMV Costs	5.0%	2.0%	2.0%
Educational Costs	2.5%	5.5%	5.5%
Marketing Costs	2.5%	2.5%	2.5%

**Total Program Costs include the Program Administrative Costs (previously mentioned), Incentive Costs (previously mentioned), Implementation Costs, and any Miscellaneous Costs.*

Portfolio administrative costs include a 1.0% of total program cost increase in order to reflect additional resources needed to comply with new rules from MEEIA and also a placeholder of $54,545 in each program for the last two years of the implementation cycle for an updated DSM potential study. The EMV costs are reduced to 2.0% for the

second and third program years as the evaluation contractors will be primarily counting the number of installations of the measures and conducting process evaluation. The EMV cost increases in PY 1 when a full portfolio level impact and process evaluation will be conducted.

Net-To-Gross (NTG) Assumptions

For the MEEIA analysis, Ameren Missouri assumed net savings equal gross savings, or NTG = 1. There is one exception to this rule, which is the residential refrigerator recycling program which has a NTG of 0.64. This program is unique in that it has a finite program duration, indicating a limited stock of available opportunities. Furthermore, EMV reports from Ameren Missouri as well as other jurisdictions indicate there are significant free riders who already remove and/or recycle their existing refrigerator or freezer. For these reasons, a NTG ratio other than 1.0 was used to model the residential refrigerator recycling program.

Hourly Load Shapes

A set of hourly forecast end-use shapes was developed to represent all of the shapes of the measures that were being analyzed. These load shape forecasts were calendar aligned to be consistent with the hourly load forecast. These hourly shapes consisted of 8760 hours of load values for a 365 day year, and 8784 hours of load values for a 366 day year within the load forecast.

To provide for scaling of the shapes to represent the savings that were projected by the modeling within DSMore, each year of each end-use shape was unitized on an annual energy basis.

The annual energy savings projections (at the meter) for each class of end-use within a program were calculated. These annual energy values were multiplied by each hourly energy value within the corresponding unitized end-use load shape to create a correctly scaled hourly end-use load shape forecast. Each of the scaled end-use load shapes within a single program is then summed on an hourly basis to arrive at an hourly end-use forecast of the program impact at the meter.

The sum of each residential and business program meter level hourly load forecast is calculated on an hourly basis to arrive at the respective Meter Level Energy Efficiency Portfolio Load Shape.

Each hour of the Energy Efficiency Portfolio Load Shapes is adjusted by the appropriate line loss factors to arrive at the Integration Level Energy Efficiency Portfolio load shapes. These two shapes are then summed on an hourly basis to arrive at the Hourly Integration Level Energy Efficiency Portfolio Load Shape which is subsequently used in Ameren Missouri's resource plan model, MIDAS.

design and delivery, market segments, and other societal factors that affect the program's performance.

Process evaluations have used program implementer/contractor interviews, retailer surveys, participant surveys and review of program materials to inform the process evaluation. Stakeholder and retailer interviews provide details on program design, staffing levels, training, implementation, marketing to retailers, retailer satisfaction, marketing to consumers, products, payments and invoicing, communications, tracking and market feedback. Program data reviews provide further information on program design and implementation processes. Participant surveys include questions about how the participant learned about the program, how the process operated, decision-making criteria, and overall program satisfaction.

Program Improvements Based on Previous Evaluations

Evaluations of previous energy efficiency programs have allowed Ameren Missouri to make improvements to programs. These improvements have included:

- The removal of high leakage stores from the Lighting Program
- Removal of appliance measures that were not cost effective or for which the market had already been transformed
- Making programmable thermostats optional in the Multi-family Income Qualified Program due to building manager concerns
- Adjustments to measure savings values
- The information learned from evaluators, including measure savings values and incremental cost information, was used in the development of the TRM. By the time the TRM is finalized, all Ameren Missouri energy efficiency programs will have been evaluated at least once, with the three largest programs, Business Custom, Business Standard, and Residential Lighting & Appliance, being evaluated three times. The results from each year have been similar, such as the Business Custom and Standard NTG ratio based only on free-ridership being identical each year.

Changes to EMV for MEEIA

Ameren Missouri is submitting a TRM with this filing. This will greatly impact the evaluation needs. The TRM will contain deemed savings values for measures. In PY2 and PY3, the evaluator's primary role in the impact evaluation will be to verify the installation of measures; taking instrumented readings of energy consumption will not be a part of the process. This verified number of measures will be multiplied by the deemed savings values to determine the program savings. At the end of first year of implementation cycle, the evaluator will be expected to complete a full impact evaluation of all programs. This will include any necessary measurement to determine adjusted savings values for each measure. One of the lessons learned in previous evaluations is

As is required by the Commission's MEEIA regulations, Ameren Missouri will require its evaluators to provide the Stakeholders with a copy of draft and the final EMV report at the same time as they are provided to Ameren Missouri.

As a result of the TRM and the reduced scope of the impact evaluation, the evaluation budget has been reduced. The evaluation budget for the previous three year portfolio was 5% of the program budget. For this three-year portfolio, the annual evaluation budgets will be 5%, 2%, and 2% respectively, which are at or below the 5% budget limits.

Another consideration in the evaluation involves the provision in the Commission's MEEIA regulations requiring the Commission to hire an independent contractor to audit and report on the EMV activities of the electric utilities and their evaluation contractors. The Company's evaluation contractors will be expected to fully cooperate with the Commission's auditor. Ameren Missouri's plan includes allowances for these additional tasks in its anticipated evaluation budget. In order for the Company to adequately prepare its RFP for EMV services it is important to understand specific scope of work associated with the Commission's auditor. In order to facilitate a smooth process, Ameren Missouri recommends the Commission adopt the following scope of work and schedule.

- Issue RFP for auditor services within 30 days after MEEIA approval
- Auditor should review and agree to evaluation plans in the 1st quarter of 2013
- Auditor should review final annual evaluation reports
- Auditor should submit draft and final reports to all parties in the case simultaneously. The draft report should be available 15 days after the final report of the utility EMV contractor and the final reports should be available 45 days after the final report of the utility EMV contractor.

The following schedule is an estimate of the evaluation activity timeline. All dates are subject to change based upon the timing associated with the approval of the proposed plan.

Table 3.28 EMV Schedule

Task	Due Date
Issue Evaluation RFP	8/1/2012
Hire Evaluation Contractor(s)	10/1/2012
Create Evaluation Plan	1/1/2013
PY1 Evaluation Draft Report	5/31/2014
PY1 Evaluation Final Report	6/30/2014
Evaluation Audit Report	8/15/2014
PY2 Evaluation Draft Report	3/30/2015
PY2 Evaluation Final Report	4/30/2015
Evaluation Audit Report	6/15/2015
PY3 Evaluation Draft Report	3/30/2016
PY3 Evaluation Final Report	4/30/2016
Evaluation Audit Report	6/15/2016