OVERVIEW OF IRBID DISTRICT ELECTRICITY CO. (IDECO)

Energy Efficiency Goals and Efforts to Promote Energy efficiency

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COMPANY PREVIEW

- *IDECO is one of three electricity distribution companies in Jordan. IDECO is a private company established in 1957, serving approximately 350,000 customers across 23,000 square kilometers. IDECO was privatized in* **2008** *and is now majority owned by Electricity Distribution Company (EDCO), which is in turn wholly owned by Kingdom Electricity Company*

- *IDECO operates in the rural, sparsely populated northwest region of the country, and the primary consumers of the electricity they distribute are residential customers and water pumping facilities. It should be noted that the residential and commercial customers constitute over 90% of the total IDECO customers, but consume only 60% of the electricity. Water pumping facilities consume over 23% of electricity, industrial facilities close to 10%, and street lightning close to 5%.*

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IDECO ENERGY EFFICIENCY EFFORTS TO PROMOTE ENERGY EFFICIENCY

IDECO proposals: ***ENERGY EFFICIENCY PRODUCTS OF CFLS, SWHS, STREET LIGHTING AND Awareness campaign***

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PROJECT OBJECTIVES

- *Consumption Savings. Provide residential customer with realizable savings to their energy bills (electricity, diesel or otherwise) by offering them convenient service and installation of high efficiency CFLs and SWHs.*
- *Marketing. Leverage customer, access and marketing capability to increase awareness in energy efficiency technology.*
- *Financing. Allow customers to pay for energy efficiency products in installments that will be invoiced with electricity.*
- *Employment. Create employment opportunities in this important sector in Jordan.*
- *National Contribution. Contribute to the national objectives of energy efficiency.*

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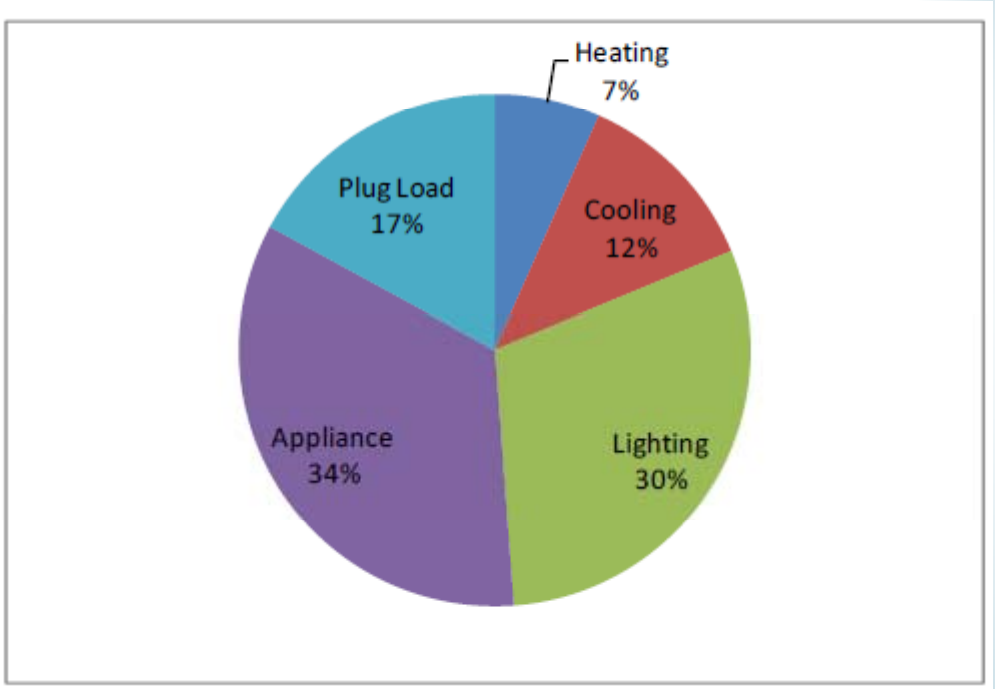
PROJECTS DESCRIPTION

- *The initiation of energy efficiency proposal starts by looking to the potential consumption with the easiest way to reduce it.*
- *Nexant's market potential study which was conducted at 2011 classified the residential consumption as the following*



- *The main two elements in residential consumption which may be handled in easy way are lighting and water heating and represent around 37% of overall residential consumption. The way of applying energy efficiency in this model is to replace the traditional home lights (fluorescent and tungsten) with CFLs, and using of solar water heaters instead of electricity water heaters.*
- *For street lighting, it represents around 5% of overall IDECO sold energy. It is proposed to use LEDs instead of traditional sodium lights.*

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OPERATING MODEL CFLS AND SWH

1- Use of trading model: in this model, it is proposed for IDECO to buy the products from high qualified suppliers, and sell it to customers with marginal revenue which will cover its cost and profit. The following actions are proposed for this model:

- *IDECO develops marketing materials and plan*
- *IDECO trains core team of sales and marketing team*
- *IDECO distributes marketing material*
- *IDECO Call Center follows up and receives calls*
- *IDECO installers inspect residence, complete delivery and/or installation, and collects deliver/ installation cost, collects signed user "acceptance form" and provides user manual with tech support contact info.*
- *IDECO provide after sales support and maintenance*

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2- *use of mediation model: in this model*, *an agreement will be conducted between IDECO and high qualified suppliers such that IDECO will facilitate the installments collection and provide an appropriate place for supplier in IDECO offices to deal with customers. The following actions are proposed for this model:*

- *Supplier develops marketing materials and plan in coordination with IDECO*
- *Supplier and IDECO train core team of sales and marketing team*
- *Supplier distributes marketing material*
- *Supplier is notified regarding the confirmed order*
- *Supplier installers inspect residence, completes delivery and/or installation, and collects deliver/ installation cost, collects signed user "acceptance form" and provides user manual with tech support contact info, and logs contract with IDECO*
- *Supplier provide after sales support and maintenance*
- *In event of maintenance needs, Supplier will service the clients keeping with the warranty offering of Supplier including 1 year free maintenance.*

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OPERATING MODEL STREET LIGHTING

- *Since the replacing of current street lights with LEDs needs a high investment, it is proposed to seek for qualified suppliers to execute the project in long term phases and get installments through IDECO by the same amount of monthly municipalities' bills.*

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BENEFITS AND ECONOMIC OPPORTUNITY LIGHTING

– *By looking to IDECO case:*

- *Total sold energy in 2011 is 2138 GWH*
- *Residential consumption represents around 43% of overall IDECO sold energy which is equivalent 924GWH*
- *30% of residential consumption is for lighting which is equivalent to 277GWH*
- *By using of CFLs, the target for reduction of lighting consumption for residential customers will be 277GWH*
- *By applying a deviation factor of 0.6 for different causes (already used CFLs, demand variation, market penetration etc.), the forecasted reduction is 166 GWH.*
- *The proposed reduction represents around 7.8% of total sold energy in IDECO.*
- *The average consumption per residential customer per year for 2011 is around 3,169Kwh*
- *The average proposed reduction per residential customer = 3368x0.3x0.7=666Kwh*
- *The minimum value of reduced consumption in JD = 606x.033 = 20JD*

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BENEFITS AND ECONOMIC OPPORTUNITY SWH

- *as above mentioned figure, the water heating represents around 7% of residential sector energy consumption. By looking to IDECO case:*
  - *Total sold energy in 2011 is 2138 GWH*
  - *Residential consumption represents around 43% of overall IDECO sold energy which is equivalent 924GWH*
  - *7% of residential consumption is for water heating which is equivalent to 65GWH*
  - *By using of SWHs, the reduction of electricity in water heating for residential customers will be 65GWH*
  - *By applying a deviation factor of 0.6 for different causes (already used SWHs, demand variation, market penetration etc.), the forecasted reduction is 39GWH.*
  - *The proposed reduction represents around 2% of total sold energy in IDECO.*
  - *The minimum proposed reduction in overall consumption = 39x1000,000x0.033 = 1,280,114JD*

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ACTION PLAN AND NEXT STEPS

- *Upon acceptance of the proposal, IDECO will work to develop a detailed work plan for the launch and implementation of the project.*
- *IDECO will:*
  - *Contact the ERC to get the acceptance for proposed business and for the required actions like set the installments on the customers' bills.*
  - *Refine and develop elements of the business, operating plan and work process to eliminate any risks and challenges; develop an agreement for the implementation of the project.*
  - *Do a Pilot territory and/or customer "profile", and then based on the success/learning, begin to market to other segments/customers.*

- *Finalize definition and execution of the following key elements:*
  - *Marketing material and process documentation*
  - *Customer agreements and forms*
  - *Sales, Installation/Deliver, and Technical Support procedures*
  - *Training of IDECO teams*
  - *Deployment of campaign and installation*
  - *Customer service follow up*

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ENERGY EFFICIENCY AWARENESS CAMPAIGN

MAIN CHALLENGES FOR IDECO

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MAIN CHALLENGES FOR IDECO

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BUILDING CAPACITIES

Developing EE programs requires the companies to build capacities in the following fields:

- ✓ *Assess the market potential for energy efficiency*
- ✓ *Design appropriate energy efficiency programs*
- ✓ *Implement energy efficiency programs to end users*
- ✓ *On going monitoring and evaluation of the impacts and performance of these programs*

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RISK IN INVESTMENT IN EE

1- The investment in EE appeared to be more risky than the business as usual investment. Also, the applying of EE programs will reduce the investment in core business which will reduce the return of the companies.

2- Reduction of sold energy means reduction of revenues which covers the fixed cost of the company during tariff review period and this will lead to reduction of cash flow for the companies and increase the probability of borrowing to cover the required cost

3-Reduction of technical losses will not necessarily lead to reduction of losses percentage, in the contrary this may increase the percentage of the losses and lead to exceeding the targeted losses since theft energy remains the same. The risk is if the losses percentage exceeds the targeted losses, the company will pay the increment from its profit

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AWARENESS OF END USER

The awareness of end user is the key success element for EE program since he is the initiator in most cases of EE applications

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EE BUILDING CODE

The applying of EE programs will cover both the current situation and the future one. Due to the expansion of buildings, the absence of EE building codes will increase the efforts and challenges in the future to achieve the targets of required demand reduction

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LABELING OF EE PRODUCTS

As for the EE building code, labeling of EE products will minimize the efforts to achieve the targets of required demand reduction. Also, the existence of labeling system will increase the awareness for end users

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FINANCING

The investment in EE may require the companies to search for different resources for funding, this may lead to obstacles for program financing and charge the companies the cost of finance

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THANK YOU