

Financing Options for Energy Efficiency

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EESL Business - Objectives

- Create market access in public and private facilities – handholding, information dissemination, capacity building
- Develop projects for various sectors addressing specific barriers and challenges
- Design innovative risk mitigation measures to address technical, financial and regulatory risks
- Provide and secure funding at reasonable rates for project implementation
- Develop model templates necessary for project implementation by including the above
- Disseminate best practices to stakeholders so that replication can occur

EESL Business Models

- Partner with private sector entities
- Risk sharing mechanism developed – technical risk of the private sector partner and revenue risk of EESL
- Selection of private sector partner through open competitive bidding
- Enable financing for PPP projects at reasonable rates – through Banks/ FIs/ Bilaterals and Multilaterals
- Partnership policy evolved to ensure good projects do not languish due to lack of financing

EESL Financial Model

- Deemed savings approach
- Payments delinked to regular demonstration of savings to reduce investment risks
- ROE (post tax) of 15.5% (minimum)
- All other project costs on actuals
- Procurement following open competitive bidding
- Payment security through ESCROW, LCs, Bank Guarantee

Indian ESCO Market Potential

➤ Agriculture pumping

Description	Units	Value
Energy saving potential from replacing existing agricultural pumps with EE pumps	million kWh	37,913
Investment potential required replacing the existing pumps with EE pumps	Rs. Crores	53,080

➤ **Building:** Commercial buildings, government owned office and hospitals, and private owned hotels

Description	Units	Value
Energy saving potential	million kWh	3,520
Investment potential required for the realization of the saving potential	Rs. Crores	1,139

Indian ESCO Market Potential (2)

➤ Municipal sector

➤ Water treatment plant

Description	Units	Value
Energy saving potential (@ 25% of energy saving potential)	million kWh	4,732
Investment potential required for the realization of the saving potential	Rs. Crores	7,098

➤ Street lighting

Description	Units	Value
Energy saving potential (@ 25% of energy saving potential)	million kWh	1,873
Investment potential required for the realization of the saving potential	Rs. Crores	2,809

Indian ESCO Market Potential (3)

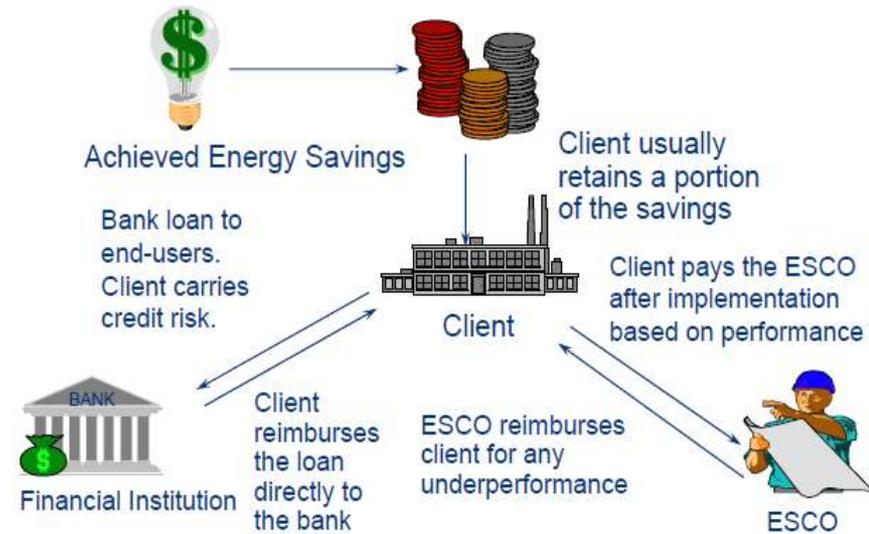
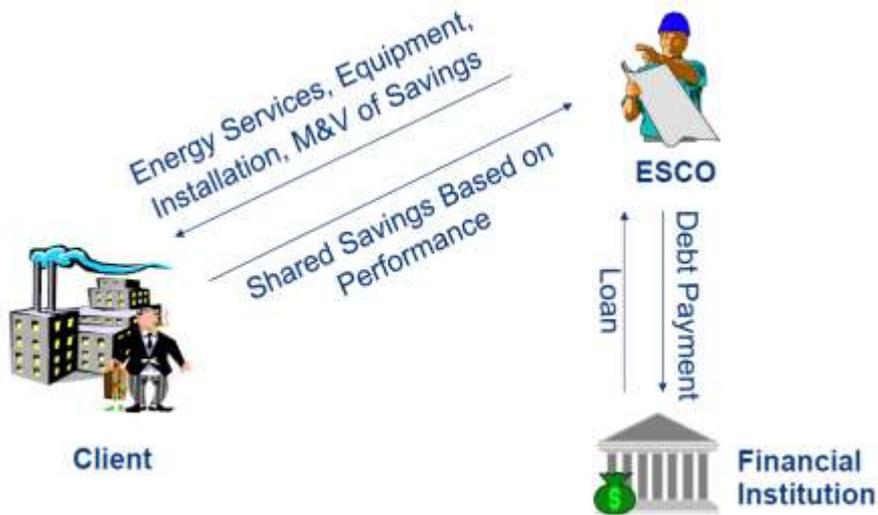
- **Industrial sector** - Aluminum, cement, Chlor Alkali, fertilizers, integrated steel plant, pulp & paper, textile and thermal power

Description	Units	Value
Energy saving potential	million kWh	9,783,400
Investment potential required for the realization of the saving potential	Rs. Crores	30,603.17

Total Potential assessed Rs 95,000 crores (USD 15 b)

ESCO Model

- Shared Savings or Guaranteed Savings



Promoting Industrial Energy Efficiency Investments

GoI

- MoP, GoI India launched the PAT (Perform Achieve and Trade) scheme as one of the 4 initiative taken under NMEEE (National Mission for Enhanced Energy Efficiency) for large industries in 8 sectors.
- 3 year targets for reducing Specific Energy Consumption (SEC) have been notified.
- The scheme also incentivises for over achievement of SEC by a market based mechanism through issuance of tradeable Energy Savings Certificates (ESCerts) & penalizes for under achievement .

Role of EESL

- Energy Efficiency Services Limited is a JV company of PSUs of Ministry of Power having mandate to promote energy efficiency.
- GoI has authorized EESL as implementing arm of National Mission on Enhanced Energy Efficiency.
- On behalf of BEE, EESL has conducted the PAT Baseline Energy Audit at the 478 Designated Consumers in 8 sectors through its empanelled energy auditors.
- EESL's offer for PAT JIP to all Designated Consumers

Promoting Industrial Energy Efficiency Investments

➤ Total PAT Investments

Sector	No. of DCs	Energy Consumption (Million TOE)	Energy Saving Target (Million TOE)	Expected Investment (in INR Crore)
Cement	85	15.01	0.816	4190
Chlor Alkali	22	0.88	0.054	439
Pulp & Paper	31	2.08	0.123	135.23
Fertilizer	29	8.2	0.478	N.A.
Iron & Steel	67	25.38	1.486	1004.23
Power Plant	144	104	3.211	11891.75
Aluminium	10	7.7	0.456	N.A.
Textile	90	1.2	0.066	365.31
Total	478	164.45	6.69	18025.52

EESL Value Add

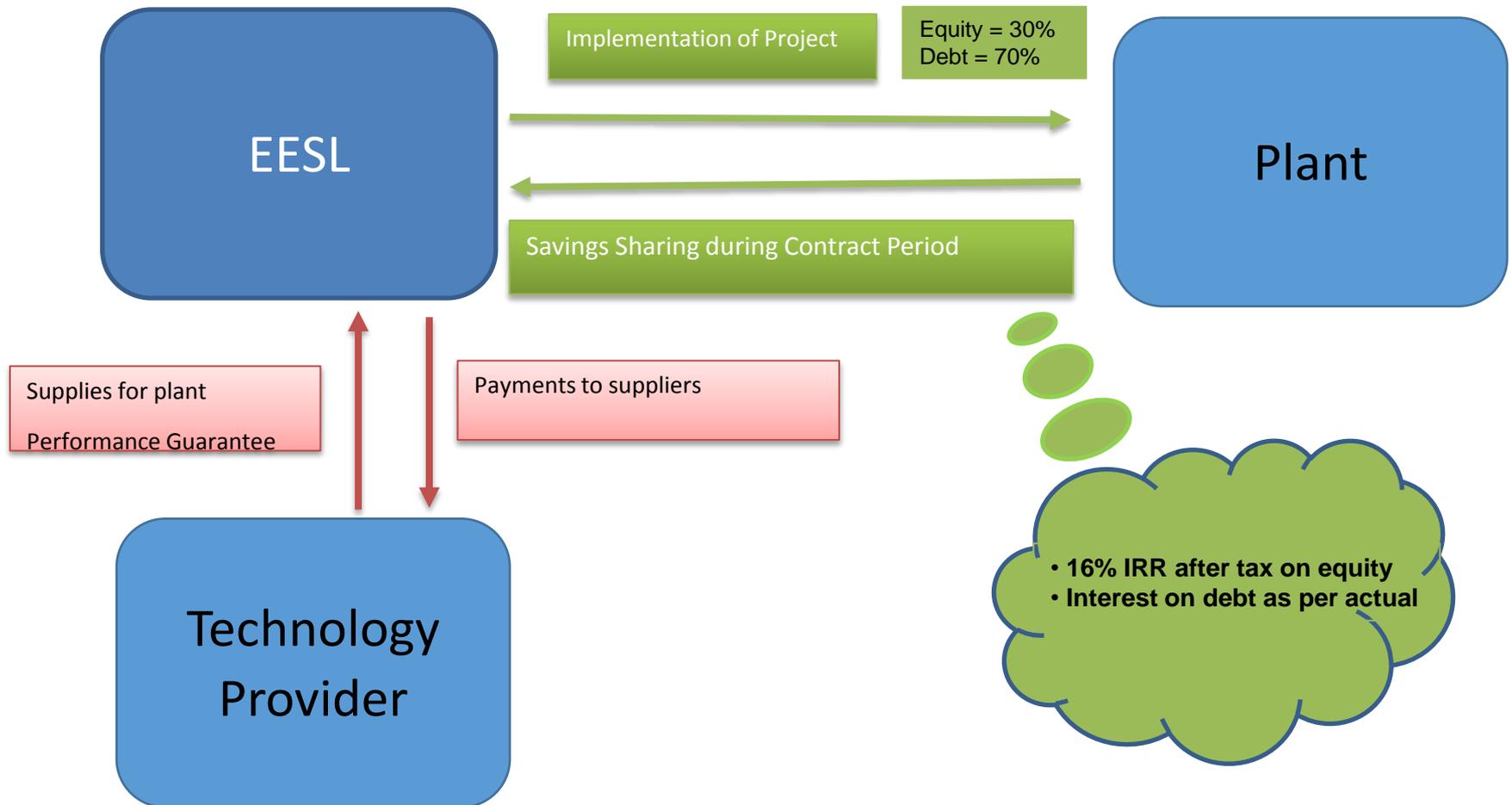
Technical

- Technical assessment at site with Plant and EESL
- Sharing of best practices
- Bearing the Technical risk to implement in ESCO mode

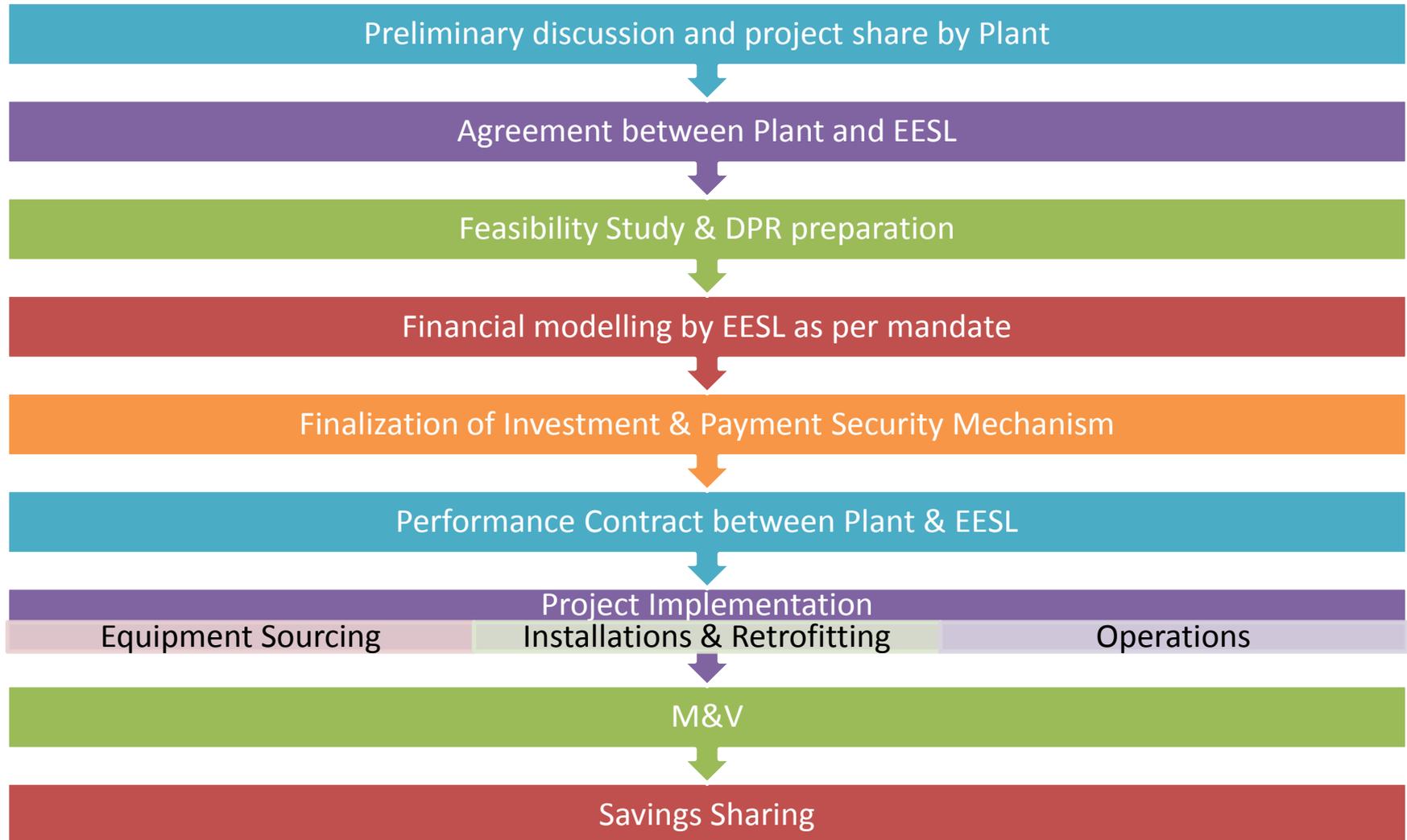
Financial

- Bringing in project financing
- Third Party implementation through EESL in association with supplier at no cost to Plant
- Turnkey Project Execution

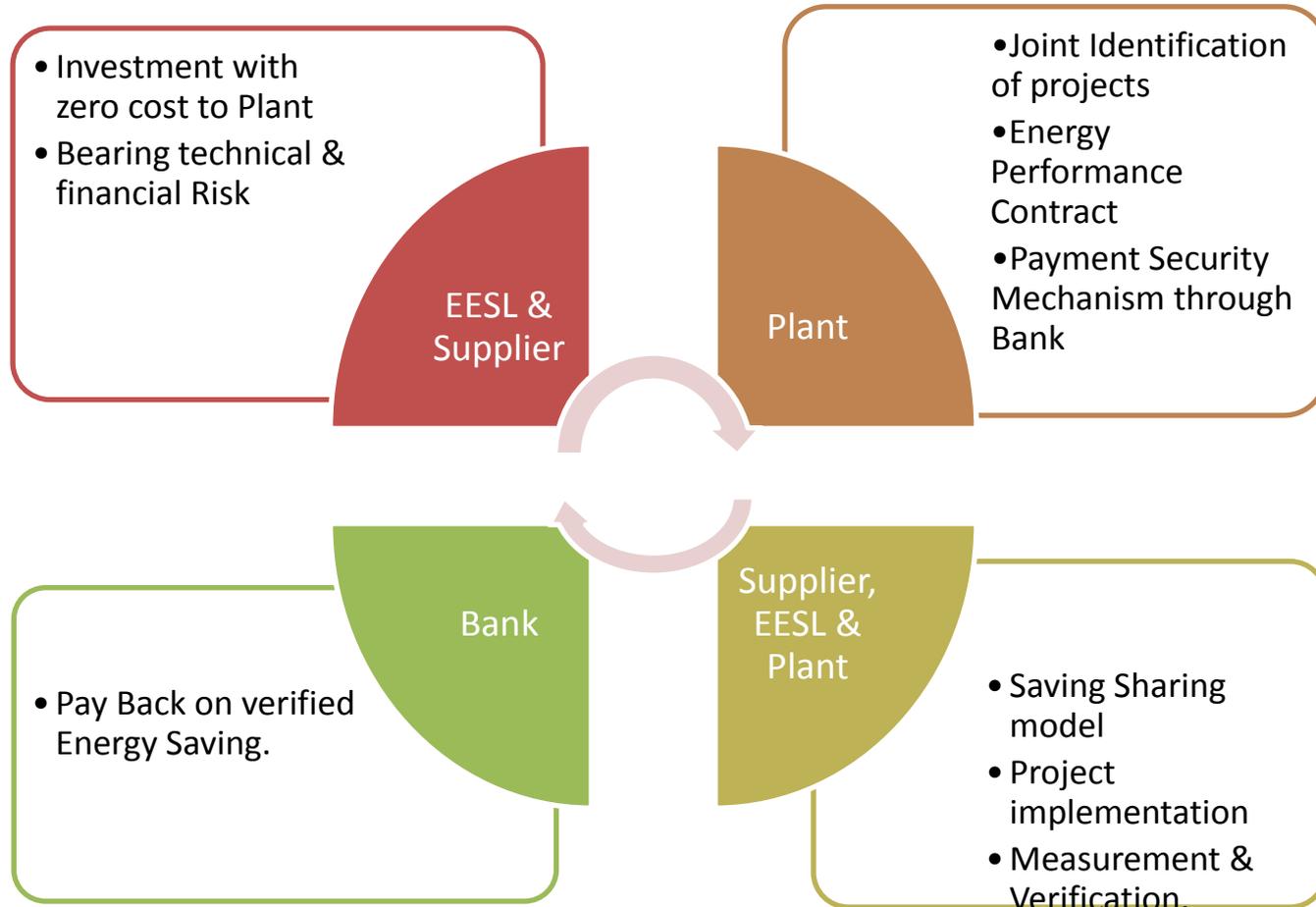
EESL Methodology



EESL Activity chart



Project Implementation Matrix



Thank You