

Research and Development schemes under Ministry of Power

Schemes at Present

- National Perspective Plan(NPP)
- Research Scheme on Power(RSOP)
- In House Research and Development(IHRD)

Technical Committees for Granting
Approval to projects under the schemes

Technical Committee on Hydro Research

Professor from IIT / IISc. or industry expert	Chairman
Executive Director (Hydro Expert), BHEL	Member
Executive Director (Hydro Expert), NHPC	Member
Executive Director (Hydro Expert), SJVNL	Member
Chief Engineer, CWC	Member
Chief Engineer (HETD), CEA	Member
CPRI representative	Member
Chief Engineer (R&D) / Director (R&D), CEA	Permanent Invitee
Head of R&D, CPRI	Member Convener

Technical Committee on Thermal Research

Professor from IIT / IISc. or industry expert	Chairman
Executive Director, NTPC Energy Technology Research Alliance (NETRA)	Member
Executive Director (Thermal Expert), BHEL	Member
Chief Engineer (TETD), CEA	Member
Representative of Generating Company	Member
CPRI representative	Member
Chief Engineer (R&D) / Director (R&D), CEA	Permanent Invitee
Head of R&D, CPRI	Member Convener

Technical Committee on Transmission Research

Professor from IIT / IISc. or industry expert	Chairman
Executive Director (Transmission Expert), BHEL	Member
Executive Director, POWERGRID	Member
Chief Engineer (SETD), CEA	Member
Representative of State TRANSCO (KPTCL)	Member
Representative of IEEMA	Member
CPRI representative	Member
Chief Engineer (R&D) / Director (R&D), CEA	Permanent Invitee
Head of R&D, CPRI	Member Convener

Technical Committee on Grid, Distribution & Energy Conservation Research

Professor from IIT / IISc. or industry expert	Chairman
Representative from Bureau of Energy Efficiency (BEE)	Member
Chief Engineer (DP&D), CEA	Member
Representative from MNRE	Member
Representative of DISCOM	Member
Representative from IEEMA	Member
CPRI representative	Member
Chief Engineer (R&D) / Director (R&D), CEA	Permanent Invitee
Head of R&D, CPRI	Member Convener

Final Approval and review of projects under the scheme

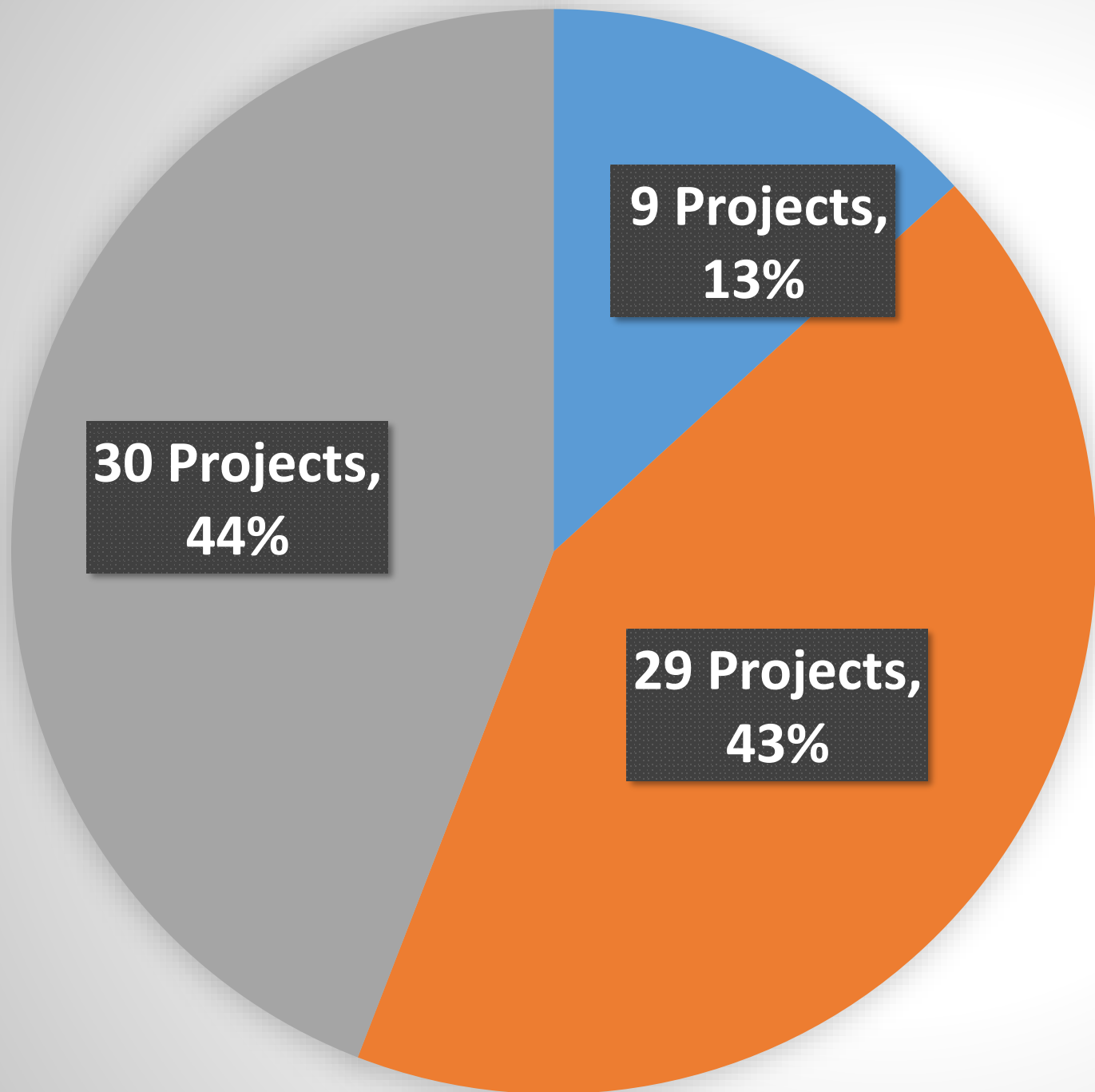
(2012-17)

Standing Committee on Research & Development (SCRD)

Chairperson, Central Electricity Authority	Chairman
Joint Secretary & FA, Ministry of Power, Govt. of India	Member
Joint Secretary (I/c) of R&D, Ministry of Power, Govt. of India	Member
Chairman of Technical Committee on Hydro Research	Member
Chairman of Technical Committee on Transmission Research	Member
Chairman of Technical Committee on Grid, Distribution & Grid, Distribution & Energy Conservation	Member
Chairman of Technical Committee on Thermal Research	Member
Department of Scientific & Industrial Research – Scientist ‘G’	Member
Deptt. of Industl. Policy Promotion – Intellectual Property Rights Expert	Member
Chief Engineer (R&D), CEA	Member
Director General, CPRI	Member-Convener

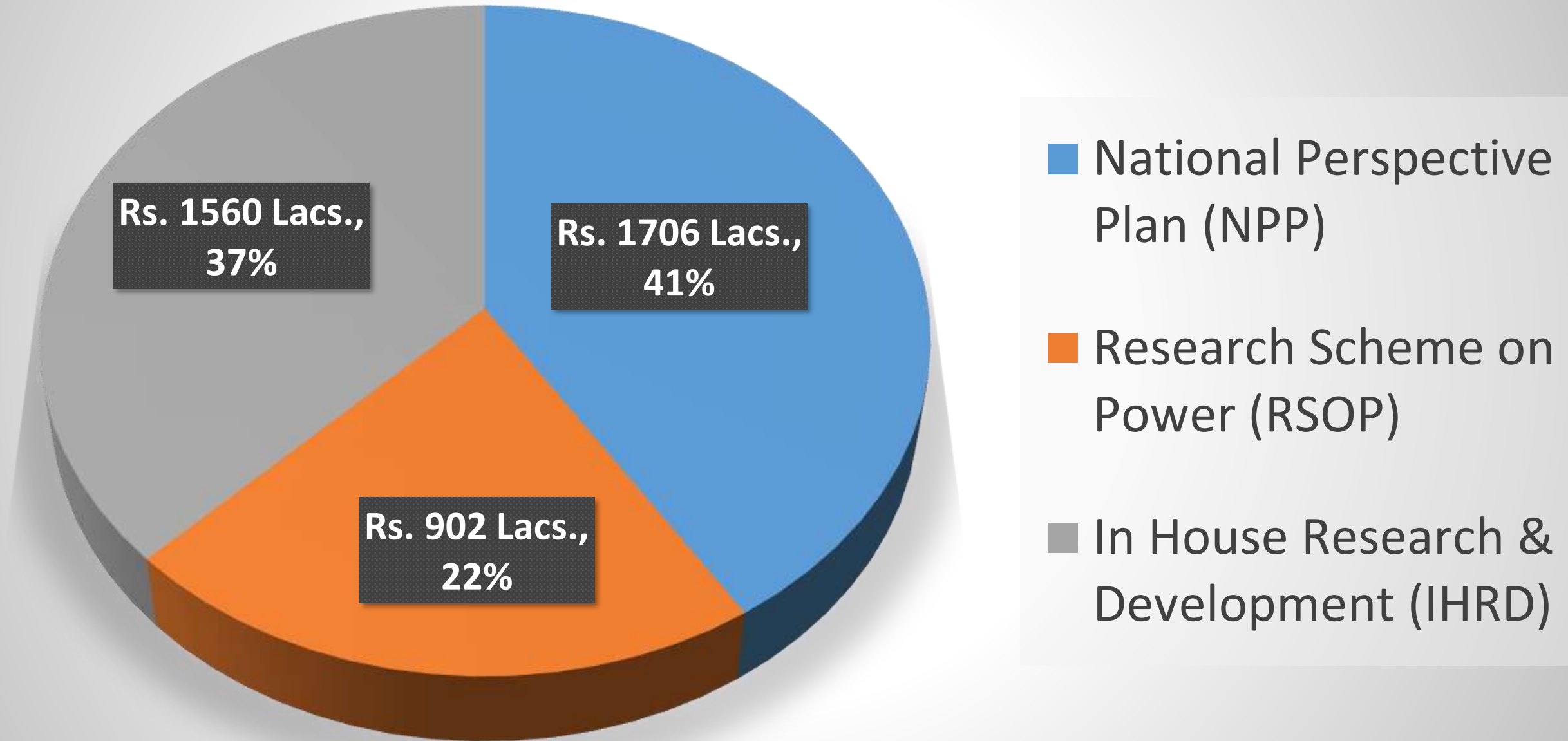
Research Projects During 12th Plan

(2012-17)

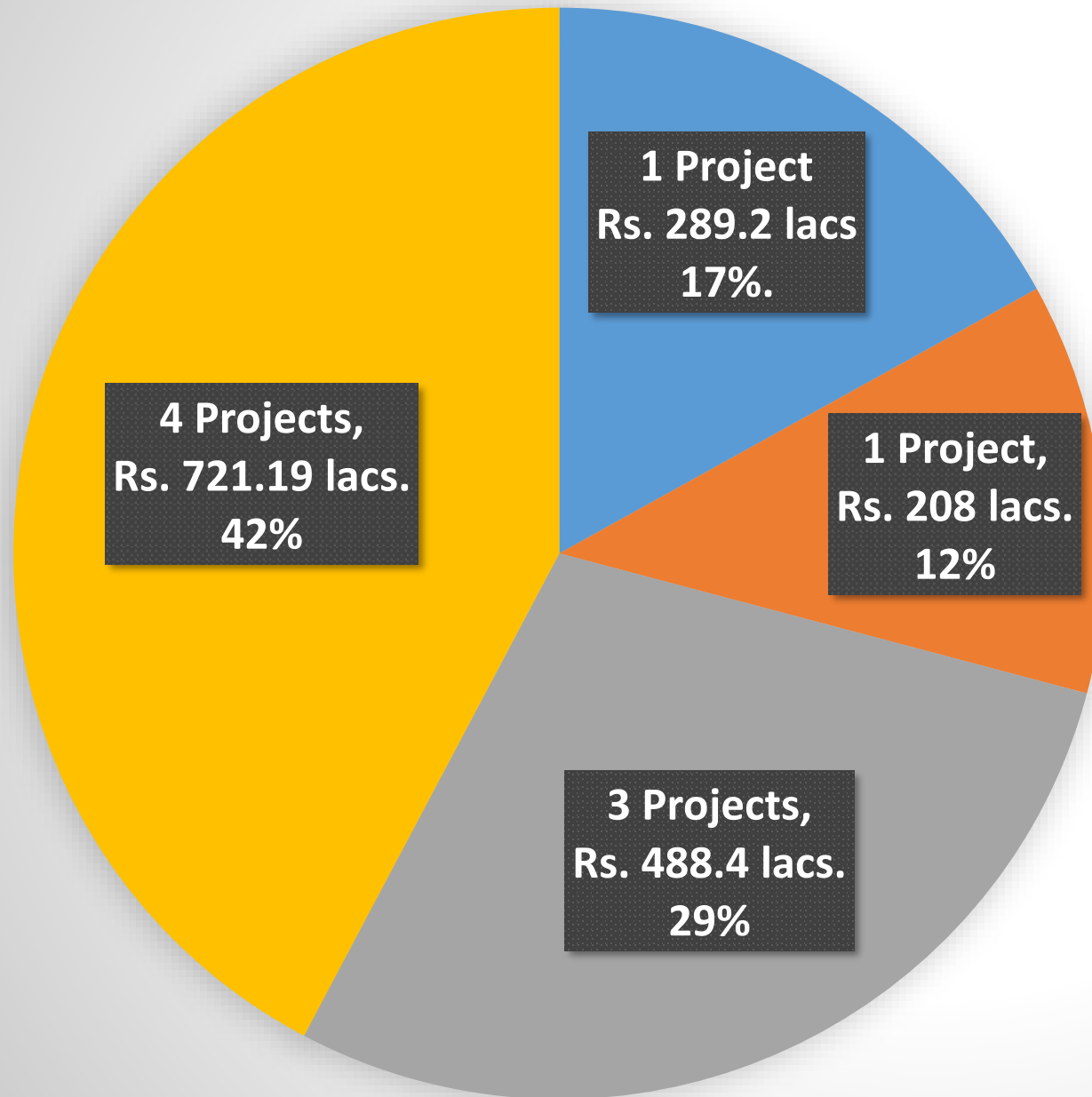


- National Perspective Plan (NPP)
- Research Scheme on Power (RSOP)
- In House Research & Development (IHRD)

Allocation of funds (lacs.)



National Perspective Plan (NPP)



■ Hydro

■ thermal

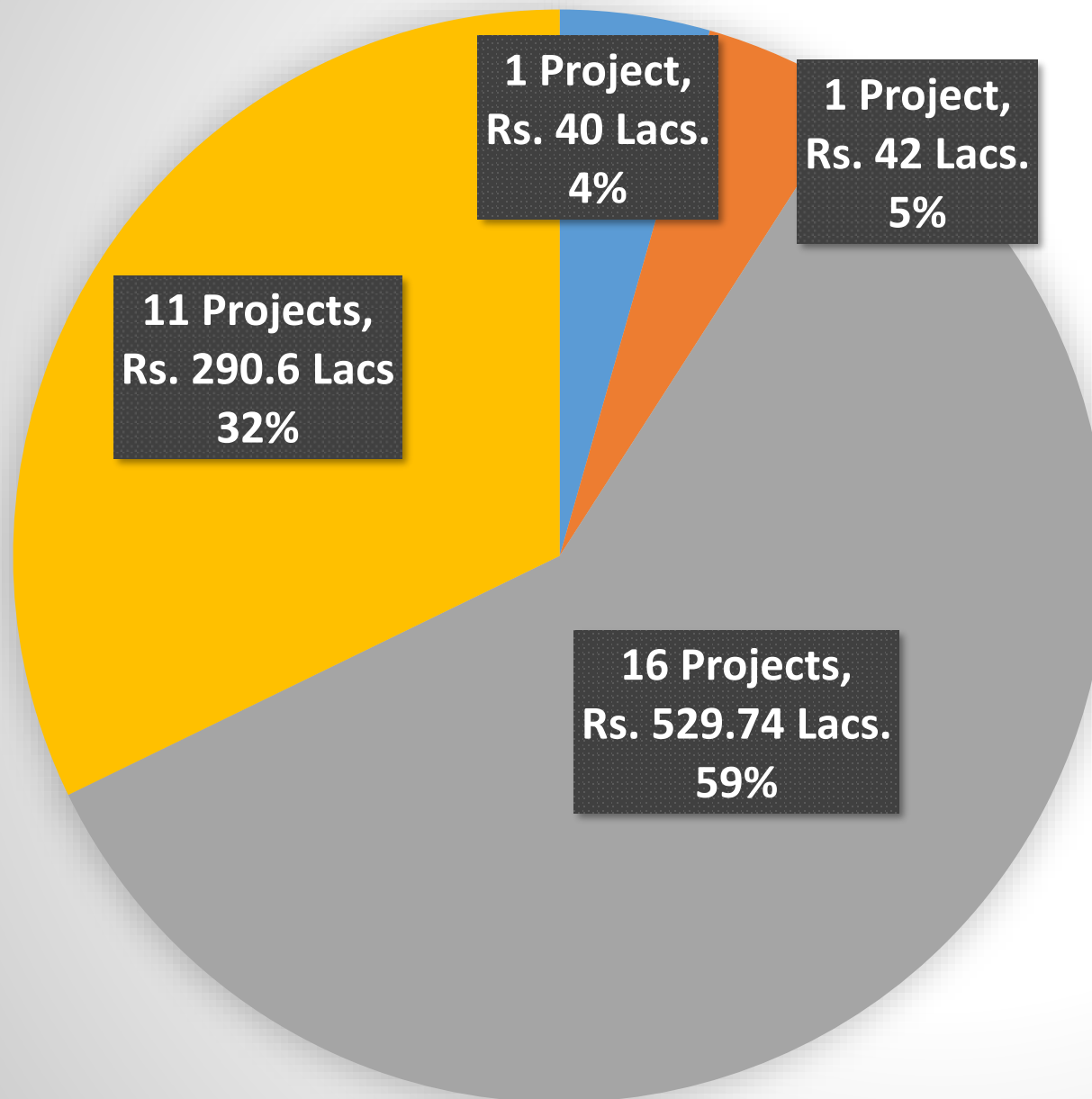
■ transmission

■ Grid, Distribution & Energy Conservation

Sample projects under National Perspective Plan (NPP)

- Development of polymer nano-composites for EHVDC Lines and diagnostics adopting laser induced breakdown spectroscopy (LIBS).
- Low cost silicon rubber insulator.
- Development of a selection methodology for road header and tunnel boring machine in different geological conditions for rapid tunneling.
- Large bed PV smart system for dust mitigation and reliability.

Research Scheme On Power (RSOP)



■ Hydro

■ thermal

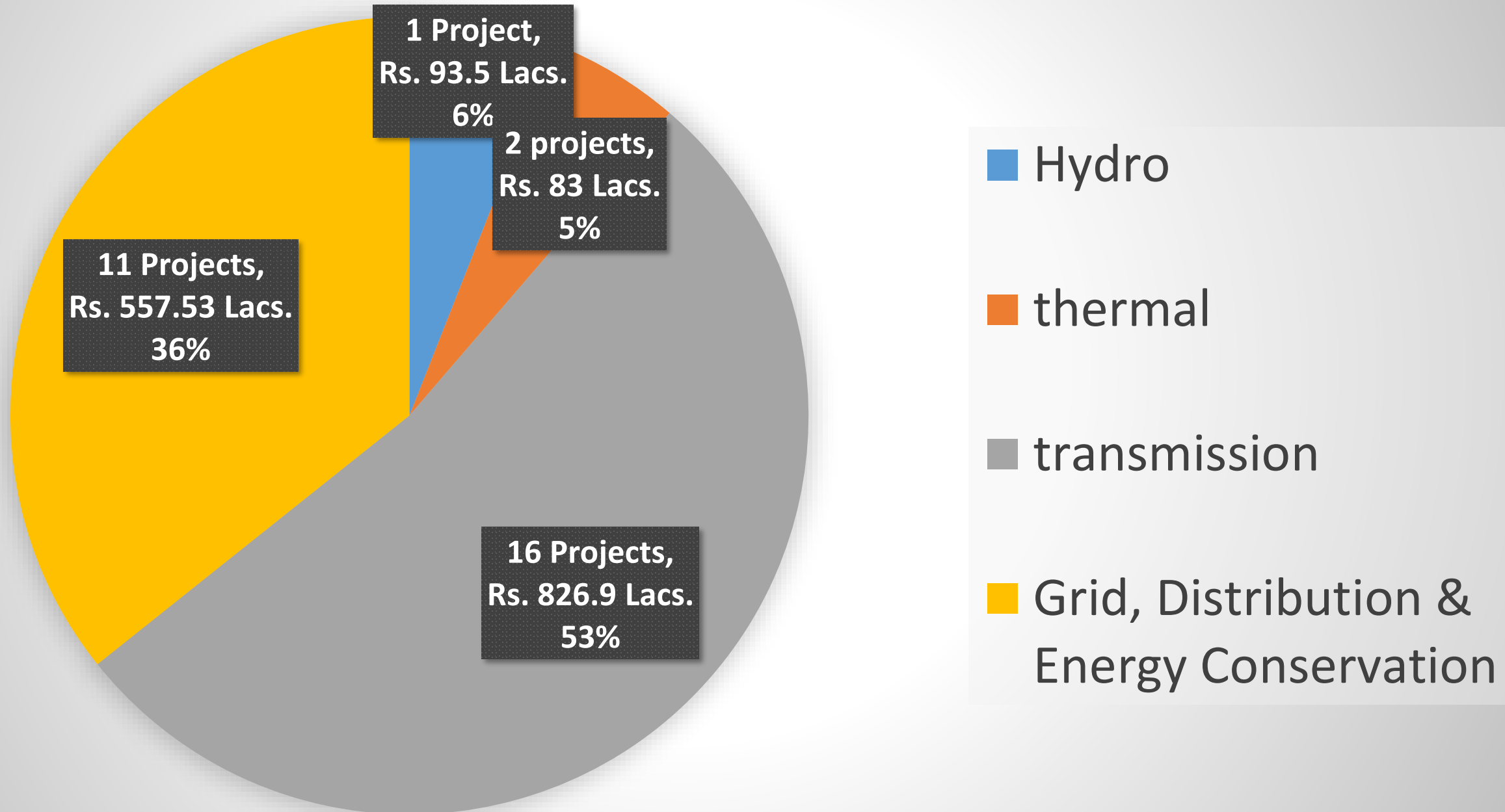
■ transmission

■ Grid, Distribution & Energy Conservation

Sample projects under Research Scheme On Power(RSOP)

- Hydrogen Fuel Generation by splitting of water using Nano sized Metal Doped layered titanates for Fuel Cell Applications.
- Design and Optimization of Feedback Controller for Boost type dc-dc Converters using Artificial Immune System.
- Studies on Development of Guidelines for Best practices in Water and Water Usage in Coal Based Thermal Power Plants.
- Compilation of Data on Latest Technologies in Geological and Geo Technical Investigation and problems faced and mitigation Measures adopted during Execution of Hydro Electric Projects.

In House Research & Development (IHRD)



Sample projects under In House Research & Development (IHRD)

- Studies on stability of Various insulating Liquids under electrical discharge.
- Assessment of low cycle thermal Fatigue damage in steam turbine during transients.
- Smart Inverter with E meter and IOT.
- Run-of-the-river Low head micro hydroelectric system for off grid Microgrid operation.

Constitution of committee for assessment & review of R&D activities of Organizations/PSUs under the Ministry of Power

- To review R&D works being carried out by various organizations/PSUs under the Ministry;
- **Identifying thrust areas** for R&D and ensuring that the same is undertaken by the Organizations/PSUs under MoP in a coordinated manner; and
- To coordinate the R&D activities of the Organizations/ PSUs under MoP so that proper monitoring is done and duplicity can be avoided

Committee for Assessment & Review of R&D Activities

Secretary, MoP	Chairman
SS/AS (In-charge of T&R Division, MoP)	Member
Chairman, CEA	Member
AS, MoP	Member
DG, CPRI	Member
DG, BEE	Member
JS/EA (In-charge of CPRI, MoP)	Member Secretary
JS and FA, MoP	Member
Director In-charge of R&D, NTPC	Member
Director In-charge of R&D, POWERGRID	Member
Director In-charge of R&D, NHPC	Member

Constitution of Sub - Committee to identify Major Thrust Areas in R&D activities

- Assist the main Committee in meeting the objectives of the Committee set under Terms of reference;
- Assist the main Committee in coordinating the R&D activities in respect of the Organizations/ PSUs under Ministry of Power
- Identifying the thrust areas for R&D relevant to Power Sector.

Sub Committee for Assessment of R&D activities of various Organizations/PSUs under Ministry of Power

Chairman, CEA	Chairman
Executive Director, NETRA	Member
Executive Director, Powergrid	Member
Executive Director, NHPC	Member
DG, CPRI	Member Secretary