Proceedings

Workshop and Report Release

On

"Converging the Divergence between Diesel and Petrol Prices"



Agenda for the Workshop

| Time | Session Details Registration and Welcome tea | |
|---------------|---|--|
| 10:00 - 10.30 | | |
| 10.30 -11:00 | Presentation Session: Impacts of diesel and petrol price rationalisation | |
| 10.30 -11.00 | Tresentation Session. Impacts of these and petrol price rationalisation | |
| | Chair by Dr. R. K. Malhotra, Director General, Federation of Indian Petroleum Industry | |
| | Co-chair by Dr. Basudev Mohanty, Member, Petroleum & Natural Ga Regulatory Board | |
| | Presentation by: | |
| | Dr. Probal Ghosh, Head-Modelling, IRADe | |
| | Dr. Ashutosh Sharma, Senior Research Analyst, IRADe | |
| | | |
| 11:00 - 12:00 | Book Release | |
| | Inaugural Session: Price differentials between of petroleum products and it impacts | |
| | Address by Mr. Krishan Dhawan, Chief Executive Officer, Shak Sustainable Energy Foundation | |
| | Address by Dr. Kirit Parikh, Chairman, Integrated Research and Action fo Development (IRADe) | |
| | Chair and Inaugural Address: Shri Dharmendra Pradhan, Hon'ble Ministe MoPNG | |
| | Closing Remarks by Dr. Jyoti Parikh, Executive Director, IRADe | |
| 12:00 - 13:30 | Panel Discussion – | |





| Cars Sector: Mr. Sugato Sen, Deputy Director General, Society of Indian Automobile | |
|--|--|
| Bus Sector: Harish Sabharwal, Secretary, Delhi Contract Bus Association | |
| State Finances: Mr. Ajay Shankar, Fmr. Secretary DIPP, Ministry of Commerce & Industry | |
| Buses Sector: Mr. Nilmani Dutta, Chief Manager NP and PP, HPCL | |
| Open Discussion | |
| Vote of Thanks – Dr. Jyoti Parikh, Executive Director, IRADe | |
| Lunch and Networking | |
| | |

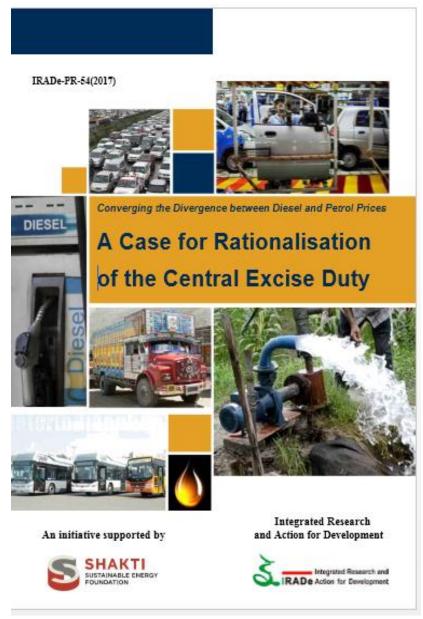




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Preface

Integrated Research and Action for Development (IRADe), is engaged in policy analysis from multidisciplinary and multi-stakeholders analysis; so that the suggestions are implementable and effective. We questioned why diesel – petrol differential should be so large and felt that this paradigm shift can be best done by the Central Government that controls excise rates for these fuels. Once this step is taken, the states might follow within a few years.

We are happy that the honourable Minister of Petroleum and Natural gas and Minister of Skill Development and Entrepreneurship, Shri Dharmendra Pradhan, not only came, but had read the report and gave his concidered responses to the suggestions we presented in our report that he released. His perspectives are valuable for us and we cannot thank him enough for this.

We are also delighted that Shakti Sustainable Foundation not only supported our work but were our knowledge partners. We had many stimulated discussions.

I would also like to extend my gratitude towards the stakeholders from Oil and Petroluem sector, Transportation sector, Automobile sector and Agriculture sector for their active participation and contribution in the workshop and report release. I thank the staff of IRADe for their hard work and dedication in organising the workshop in a successful and enthusiastic manner.

Syst K. Paule

Professor Jyoti Parikh, PhD Executive Director, IRADe





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Workshop Summary

Integrated Research and Action for Development, IRADe organised a workshop in collaboration with Shakti Sustainable Energy Foundation on "*Converging the Divergence between Diesel and Petrol Prices*" held on 30thth August, 2017 at Hotel Le Meridien, New Delhi.

The Event was held to discuss the findings of the study with various stake holders, to understand their concerns, and to define a road map for reforms. The participants included Government officials from relevant Ministries like Ministry of Finance, Ministry of Petroleum and Natural Gas, State finance persons, Oil Marketing Companies, private sector participants from Automobile, Trucking, State transport and other allied sectors.

The conference consisted of a pre-inaugural session, an inaugural session and a panel discussion on the impact of Diesel and Petrol price rationalisation on the key stakeholders such as Oil Marketing Companies, State Finances, Trucking Sector, Buses Sector, Cars Sector and Agriculture Sector.

Shri Dharmendra Pradhan, Honorable Minister of Petroleum and Natural gas and Minister of Skill Development and Entrepreneurship inaugurated the conference. Each panelist in the panel discussion consisted of representatives from the stakeholder community who not only highlighted current trends and hurdles in their field, but also shared personal observations and pushed the discussion to address specific possible solutions.

With the support and cooperation of Shakti Sustainable Energy Foundation, IRADe had analysed the impact of a revenue-neutral rationalisation of the central excise duty applicable on diesel and petrol, on private and public transportation, truck freight, agriculture and state finances, road transport corporations and passengers and found that a rationalisation of the excise tax to further reduce petrol and diesel price differential does not pose a major cost hurdle to diesel users, but can lead to the elimination of perverse incentives that currently exist in the economy. This workshop was organized to discuss it. The report presented a persuasive case for the Indian Government to further rationalize the pricing of petroleum products, in particular to eliminate the gap between the price of diesel and petrol, through revisions in the structure of central and state tax levies.





Pre- Inaugural Technical Presentation Session: Impacts of Diesel and Petrol Price Rationalisation

This session comprised of presentations by Dr. Probal Ghosh, Head-Modeling and Dr. Ashutosh Sharma, Senior Research Analyst, IRADe which was chaired by Dr. R. K. Malhotra, Director General, Federation of Indian Petroleum Industry and Co-chaired by Dr. Basudev Mohanty, Member till recently, Petroleum & Natural Gas Regulatory Board.



The discussions began with **Dr. R.K. Malhotra**, mentioning the importance of the issue of diesel and petrol price differential and its adverse impact on the economy, environment and the key stakeholders that are being covered in the report, and thanked IRADe and Shakti Sustainable foundation for their initiative. He observed that India has been traditionally diesel consuming







economy but over the years the use of diesel has come down and petrol has shot up, he also noted the adverse consequences that diesel has on the environment therefore it has become pivotal to address this gap between the price of diesel and petrol.

Dr. Basudev Mohanty in his remarks mentioned that the report is a marked progression on the part of IRADe's initiative to have a rational structure of prices. He also mentioned the different preferences that different regions have for petrol and diesel and congratulated IRADe and Shakti Sustainable Energy Foundation for adequately dealing the impacts of diesel price rationalisation on the key stakeholders covered in the report. He felt that the unique selling point (USP) of the report us the analyses of various stakeholders and their perspectives



The presentation session was spearheaded by **Dr. Ashutosh Sharma**, who mentioned that diesel is cheaper than petrol largely due to the difference between the excise duty and VAT on diesel

and petrol, and this price difference distorts the consumption pattern leaving no incentive for reduction in the usage of diesel. Currently diesel consumption is 4 times that of petrol. Therefore, economic, environmental and health concerns necessitate rationalisation of the price difference between petrol and diesel.

He mentioned that the approach used by IRADe in this study is to equalize excise duty rates on petrol and diesel in such a manner that the resulting total revenue from diesel and petrol excise duties will be the same as revenue obtained before the adjustment in excise



duties. This is called a revenue neutral approach. A change in the excise rate, leads to a change in the sale price. Thus, the demand for the product also changes. He mentioned that in ensuring revenue neutrality, we have accounted for the changes in demand due to change in retail sale prices. For this, the price elasticity's of demand were considered as -0.56 and -0.85 for diesel and petrol, respectively, as per econometric estimates in the published literature.





Trucking Sector:

Then he described impacts on trucking industry that forms the backbone of the road sector, accounting for 28 % of total diesel consumption by the sector. Specifically fuel costs constitute 55 % of an average truck's total trip expenses when considered without overheads and about 50 % when considered with overheads. He mentioned that the elasticity of TCIL (Transport corporation of India Limited), compiled Road Freight Index (RFI), with respect to diesel price is estimated by IRADe to be 0.49. Thus, with an increase in price of diesel of 2 % when excise duties are rationalised, the impact on freight rate will be just 1 %. The elasticity was estimated based on regression analysis by IRADe.

This 2% increase in the diesel price, post excise duty adjustment, will increase the freight rate by just 1%. However, this increase in freight rate can be curbed through improving the inefficiencies in the trucking operations. Therefore, this small increase should not raise much of opposition from the truckers particularly if other measures are taken to improve efficiencies. The introduction of the Goods and Services Tax (GST) is likely to reduce trucking cost by a significantly larger amount as waiting at octroi and city toll gates has been eliminated, leading to savings in fuel cost and increase in fleet utilization. He also remarked that setting up computerized exchange networks for matching loads to trucks to reduce empty return trips can reduce trucking costs.

Dr Probal Ghosh, presented the impacts on three sectors – Agriculture, Bus and Automobiles.

Agriculture Sector:

He pointed out that diesel use is increasing due to mechanization and diesel pumps are used when and where electricity not available. For instance, farmers in Haryana use 200 litres per hectare costing Rs 11000 and Maharashtra 25 litres per hectare costing Rs 1100.Therefore a 2% increase in diesel price will raise cost by 2%. Increase in total cost of diesel even in Haryana is only 0.24 % of state's total agricultural GDP, much lower in other states. He also observed that the CACP (Commission on Agricultural Costs and Prices)







while fixing the Minimum support prices compensates the farmers for cost of diesel. However, in states where most farmers use electricity for pumping but some farmers rely exclusively on diesel may not be fully compensated. In the short term the top 3-4 states that rely heavily on diesel like Bihar, UP, Haryana and Punjab may be impacted to some extent, but with electricity for all and improving electricity supply to rural areas including agricultural purposes, dependence on diesel is likely to come down further and diesel price rise impact would be even smaller.

Bus Sector:

He then spoke about impacts of diesel price rise on the bus sector. The analysis considered six years' data (2009-2015) on physical and financial parameters of 49 SRTUs' revenue. Costs and profitability for the year 2015-16 were projected for (i) diesel base price before excise equalisation and (ii) diesel scenario price after excise equalisation.

The comparison of results between the two scenarios showed that due to diesel price rationalisation, a price rise of about 1.13 % in total cost over the base price scenario across all SRTUs for the period 2015-16 could be seen. Our analysis shows that Odisha SRTU has the highest impact on Total Cost i.e. 1.13 %, while all others have less than 1 % increase. Maharashtra's BEST Undertaking and Calcutta SRTU have the least impact.

Three policy alternatives (i.e. ticket rate, vehicle productivity and the ratio of bus in service to total stock of buses) were considered in this analysis to negate the impact of diesel price rise due to price rationalisation. In the first case, the rise in prices were passed on to the passengers, in the second case the improvement in vehicle productivity was considered and in the third case the higher bus utilisation rate (Ratio of Bus in Service to Total Stock of Buses) was stipulated, keeping the other two variables steady. Marginal improvements can absorb the higher cost of diesel.

Automobile Sector:

Finally the car manufacturers and car owners were assessed for the impact of diesel price rationalisation on their sales. The analysis compared the ratio of discounted cost of buying and operating a diesel car over a petrol car under the two scenarios of diesel prices i.e. the base scenario and the diesel price rationalisation scenario. The results of the analysis showed that higher life and vehicle kilometers makes diesel car buying and owning more attractive, higher discount rate or higher cost of diesel lowers attractiveness of diesel cars. The current pricing, particularly for sedans and SUVs, already make the diesel models unattractive, Hatchback car sales are only marginally affected by a rationalisation of excise duty. Thus rationalisation of diesel and petrol prices will change the selection of some models of diesel vehicles by the





consumers. For the car manufacturers a fall in diesel car sales will however be off -set by increase in petrol car sales. The environment and health impacts of diesel increase the cost of using diesel for the society as a whole. Also introduction of BS VI will make diesel cars relatively more expensive. With courts banning diesel cars in Delhi and the trend likely to spread to other cities, future demand for diesel cars will be affected. The impact of diesel price rationalisation may have only marginal impact on car demand and supply.

Inaugural Session







The session was honoured by the presence of the **Shri Dharmendra Pradhan**, Honorable Minister of Petroleum and Natural gas and Minister of Skill Development and Entrepreneurship. Who was the guest of the honour and inaugurated the conference.

Mr. Krishan Dhawan, Chief Executive Officer, Shakti Sustainable Energy Foundation welcomed the minister with his inaugural address and spoke about his foundation's work in the aspects of clean energy. He mentioned that as a developing nation, energy plays a key role in meeting our ambitions and pricing of energy decides how resources are allocated and purchases are to be made, he mentioned that these



purchases should be made in economical, fiscal, and environmentally sustainable ways while meeting the legitimate demands of all sections of the society.

He spoke about the under recoveries and suspensions of diesel subsidies in the past and praised the government's efforts in managing these subsidies and under recoveries.

Pricing of various forms of energy impacts the consumer's choices and choices between diesel and petrol are dependent on the prices of each of the two. He said the Diesel gen-sets are continued due to the relative low price of diesel. He mentioned that the price of solar PV and diesel continue to affects the corporate choice of usage of each and the same goes for diesel pump sets and mentioned there are alternatives as solar pump sets, and the price of diesel would decide the usage of those solar pump sets. Distorting prices, distorts the market, and one has to see where and how to manage the price.

Shakti Sustainable Energy Foundation and IRADe have studied the issue because it's most important and timely. The purpose is to share the results with sector by sector analysis of the stakeholders. The study suggests that rationalizing of the excise tax through a revenue neutral approach is practical and there will not be a significant lose in the change, moreover it will act as





a clear signal of intent on the part of the government to fight air pollution and gains in reducing emission from diesel exhaust.

He highlighted that this is the opportune moment for the study to be released, as globally the impact of diesel is being questioned.

Dr. Kirit Parikh, Chairman, IRADe in his key note speech mentioned, that it is a fulfilling

moment for a researcher when he sees that his results get implemented. He expressed gratitude towards Shri Dharmendra Pradhan for implementing some of his suggestions from time

to time. He hoped that this marginal step that is being discussed in the workshop gets its due regards too.

He spoke of the price differences between diesel and petrol and the impact of rationalising the excise rates on different stakeholders. He gave a brief summary of the report to the audience.



He also mentioned that GST implementation for the petroleum industry would be beneficial for the society and highlighted that the need to rationalise the price becomes more desirable if we look at the environmental cost.

Shri Dharmendra Pradhan (Honorable Minister of Petroleum and Natural gas and Minister of

Skill Development and Entrepreneurship), commenced his inaugural address by expressing gratitude towards Dr. Kirit Parikh and Dr. Jyoti Parikh and stressed the role that researchers or academicians play in the society, the role to research and disseminate the results relentlessly until the problem is cured. He was thankful of the present government's endeavors in the field of energy to







fulfill the long-term goals of common citizens of the country.

The subsidy burden of the past was damaging the economy at an alarming rate, but due to the efforts of Dr. Kirit Parikh by recommending diesel deregulation, that were implemented by the ministry,the economy could feel a little relaxed. The minister also mentioned that Dr. Kirit Parikh's recommendation to phase out LPG and Kerosene subsidies are also underway to be implemented by the ministry.

He emphasized the need for sustainability of energy and praised the efforts of IRADe for the same. The fact that production cost of petrol and diesel is almost similar, but the delivery price differs by an amount of almost INR 10 was reiterated. There is a



need to develop a model for India looking at the Indian demography, social, economic and cultural differences. He also mentioned that BS VI will be available in 2020 and the refineries for the same are to be set up.

The recommendations provided in this report were agreeable and the fact that in accordance to the consumption pattern, 3,000 crore is spent on petrol out of which two wheelers are responsible for 60 % of the usage, it's inevitable that petrol should become cheaper. He vouched for getting petroleum sector in the GST ambit and also questioned that should public transportation and SUV use diesel at a same price.

Lastly, he suggested IRADe to design a policy roadmap of a subsidy target plan for petroleum industry and he then released the report along with others on the dais.





Dr. Jyoti Parikh delivered her closing remarks by mentioning about the past work done by IRADe on reducing the subsidy on diesel and how it had addressed the concern. She mentioned that in this report, we addressed the paradigm shift needed at the center at the excise rate level. If that is done perhaps the states may follow as well, over some time. She clarified that we have addressed the vulnerable customers such as bus travelers, scooter owners and truck drivers. The other solutions also lie in efficient vehicles and better managerial solutions.



She thanked the Minister for welcoming this initiative in a democratic and constructive spirit. She mentioned that International Energy Agency has recognized the Indian initiatives for increasing energy access and sustainability of energy and we should keep working towards this goal.

and expressed her gratitude towards all the stakeholders for their contributions and presence in the workshop. She also thanked Shakti Sustainable Energy Foundation for their support and said that we have examined this issue from energy economics point of view, but environmental concerns are also very alarming.





Panel Discussion - Stakeholder Impact Analysis



The panel discussion was held to discuss the impacts on the various stakeholders of diesel price rationalisation. The Chair for the discussion was Dr. Kirit Parikh, Chairman, IRADe and the panelists were Mr. Ajay Shankar, former Secretary DIPP, Ministry of commerce and industry, Mr. Harish Sabharwal, Secretary, Delhi Contract Bus Association, Mr. Sugato Sen, Deputy Director General, Society of Indian Automobile Manufacturers and Mr. Nilmani Dutta, Chief Manager- NP and PP, HPCL

Mr. Ajay Shankar, former Secretary DIPP, Ministry of commerce and industry pointed out that not only excise duty by the centre should be equalized, VAT rates by states should also be equalized .This is particularly important as a first step for move to GST. Though the states rely substantially on the revenue from VAT on petrol and diesel, move to GST is inevitable and some mechanism should be worked out to facilitate the transition.







Mr. Sugato Sen, Deputy Director General, Society of Indian Automobile Manufacturers, remarked that, while the government had promoted bio-diesel/bio fuels the pick- up in industry and markets did not have a transformational effect, there is a need to promote bio fuels in a rigorous manner.

Mr. .Sen later on also mentioned that why only rationalise diesel, why not also other fuels like kerosene which is priced much lower in the market, to which Dr. Kirit Parikh agreed and remarked, that in his report on Petroleum products Pricing Policy of 2010 it was also covered.

Rationalising all fuels will remove market distortions and also fuel adulterations as cheaper fuels have been used to adulterate both petrol and diesel.

Mr. Harish Sabharwal, Secretary, Delhi Contract Bus Association emphasised the need for rationalising the prices of fuels and said that petrol prices should come down and match that of diesel so that diesel use can be reduced. He also emphasised the need for a better public transport system comprising of buses. He discussed that vehicular transport in major cities is already a big problem that needs to be addressed.

Mr. Nilmani Dutta, Chief Manager- NP and PP, HPCL brought to the notice of the participants that diesel price difference between states has led to wide scale pilferage of diesel and illegal supply from low pricing states to high pricing states and said that a same rate of fuels across states would stop this from happening. He mentioned that as calorific value of diesel is more and is a more efficient fuel the cost per km for this fuel is lower compared to petrol and hence it is a preferred fuel among transporters and private vehicles.













Dr.Kirit Parikh mentioned that with GST coming in there is scope for all states to have uniform rates and help reduce demand for diesel. Dr. .Parikh also mentioned that for bio-diesel blending to really pick up the Government should reduce the prices of commercially available ethanol to make blending viable.

Dr. Jyoti Parikh, emphasised the need of price rationalisation, as lower diesel price has led to diesel vehicle congregation in the urban areas and this has exacerbated air pollution in cities and impacts the health of the population. She also emphasised the need to promote electric vehicles and said the battery technology needs to improve and new materials for battery need to be explored.

The session was followed by a Q&A round The session was followed by a Q&A round where Mr Swaminathan Aiyar, Kaushal Kishore, Dr S. C. Sharma and Mr Satpal Garg emphasised the need to account for impact of shift to EV and for an integrated energy strategy to avoid getting stuck with many stranded assets, to account for higher mileage per litre of diesel vehicles (accounted for in the study), the need for considering for cultural differences in consolidation of different oil PSUs etc. how to promote domestic exploration and the scope for acquiring equity assets abroad.

There was a general consensus on the need to rationalise diesel and petrol prices.



















The Press Coverage of the workshop-

1. Economic times <u>http://energy.economictimes.indiatimes.com/news/oil-and-gas/parikh-</u> committee-report-implementation-reduced-subsidy-burden-pradhan/60308559

2. Deccan Chronicle <u>http://www.deccanchronicle.com/videos/news/implementation-of-kirit-parikh-report-on-time-reduced-subsidy-burden-dharmendra-pradhan.html</u>

3. PIB- http://pib.nic.in/newsite/PrintRelease.aspx?relid=170374

4. **Business Standard-** <u>http://www.business-standard.com/article/news-cm/low-cost-diesel-not-</u> meant-for-suvs-and-cars-says-shri-dharmendra-pradhan-117083100680_1.html

5. **The Hindu**- <u>http://www.thehindubusinessline.com/economy/oil-minister-rules-out-excise-cut-on-fuel/article9836260.ece</u>

6. **.India Times**- <u>http://energy.economictimes.indiatimes.com/news/oil-and-gas/bs-vi-will-be-introduced-by-april-2020-oil-minister-pradhan/60308642</u>

7. **ANI NEWS**-<u>http://www.aninews.in/videosMg/NzY4MjM/implementation-of-kirit-parikh-report-on-time-reduced-subsidy-burden-dharmendra-pradhan.html</u>

8. Youtube- https://www.youtube.com/watch?v=Dqd9SWsg0co

9. Pen News-

 $\underline{https://www.pennews.net/news/1628/low+cost+diesel+not+meant+for+suvs+and+cars\%3A+dha}rmendra+pradhan\%0A}$

10. **Rediff**- <u>http://www.rediff.com/business/report/petroleum-minister-rules-out-sudden-steep-price-hikes/20140705.htm</u>

For any further details please feel free to contact-

Mr Probal Gosh - Head Modeling IRADe,

p.ghosh@irade.com





| | Attendees List | | | | |
|-----|-------------------------|-----------------------------------|--|--|--|
| Sl. | Name | Organization | | | |
| No | | | | | |
| | Guest of honour | | | | |
| 1. | Shri Dharmendra Pradhan | MoPNG, MSDE. | | | |
| | | | | | |
| | Session Chairs | | | | |
| 2 | Dr. R.K. Malhotra | FIPI | | | |
| 3 | Dr. Basudev Mohanty | PNGRB | | | |
| 4 | Dr. Kirit Parikh | IRADe | | | |
| 5 | Dr. Jyoti Parikh | IRADe | | | |
| 6 | Mr. Krishan Dhawan | Shakti Foundation | | | |
| | | | | | |
| | Panelists | | | | |
| 7 | Mr. Sugato Sen | SIAM | | | |
| 8 | Mr. Ajay Shankar | Ministry of Commerce and Industry | | | |
| 9 | Mr. Harish Sabharwal | Delhi Contract Bus Association | | | |
| 10 | Mr. Nilmani Dutta | HPCL | | | |
| | | | | | |
| | Participants | | | | |
| 11 | Mr. Chittranjan Dash | Ministry of Finance | | | |
| 12 | Mr. Anurag Mishra | Niiti AAYog | | | |
| 13 | Mr. Dhanwanti Malwani | IOCL,NR | | | |
| 14 | Ms. Garima Sodhi | ICF | | | |
| 15 | Mr. Kaushal Kishore | PDPU | | | |
| 16 | Mr. Praveen Rai | FIPI | | | |
| 17 | Mr. Rahul Agrawal | PPAC | | | |
| 18 | Mr. Rohit Dawar | PPAC | | | |
| 19 | Mr. Satpal Garg | PNGRB | | | |
| 20 | Mr. Shaqat Mubarak | NITI Aayog | | | |
| 21 | Mr. Shyam Gupta | PPAC | | | |
| 22 | Mr. U C Agrawal | PPAC | | | |
| 23 | Mr. Vikas Kochhar | Shell India | | | |
| 24 | Mr. Gaurav Tiwari | BPCL | | | |
| 25 | Dr. S.C.S Sharma | Former Planning commission | | | |
| 26 | Mr. Rs Butola | Former IOCL | | | |
| 27 | Dr. R.K. Singh | LIFE | | | |
| 28 | Ms Arshpreet | Shakti Foundation | | | |





| ••• | | |
|-----|------------------------|----------------------------|
| 29 | Mr. P.K Banerjee | SIAM |
| 30 | Mr. S. Rath | FIPI |
| 31 | Mr. Deshit Anymo | LIFE |
| 32 | Mr. James Ding | SGCC China |
| 33 | Mr. Ray Sudweeks | US Embassy |
| 34 | Mr. Kevin Mcown | US Embassy |
| 35 | Mr. Ashish Mittal | PPAC |
| 36 | Mr. Yogi Mehta | India Energy Foundation |
| 37 | Mr. Bilal Abdi | ETENERGY |
| 38 | Mr. Swaminathan Aiyar | TOI |
| 39 | Mr. Sanjeev Ahluwalia | ORF |
| 40 | Ms. Kaushiki Sinha Ray | FIPI |
| | | |
| | Organisers | IRADe |
| 41 | Mr. Sharad Verma | Assistant Director |
| 42 | Dr. Probal Gosh | Head, Modelling Group |
| 43 | Dr. Ashutosh Sharma | Sr. Research Analyst |
| 44 | Mr. B.K. Sarkar | Sr. Administrative Officer |
| 45 | Mr. Anshuman Behera | Research Assistant |
| 46 | Ms. Sanya Dhillon | Research Assistant |
| 47 | Ms. Ananya Mukherjee | Research Associate |
| 48 | Mr. Akhilesh Kumar | Office Assistant |





About IRADe

IRADe is an independent advanced research institute which aims to conduct research and policy analysis to engage stakeholders such as government, non-governmental organisations, and corporations, academic and financial institutions. Energy, climate change, urban development, poverty, gender equity, agriculture and food security are some of the challenges faced in the 21stcentury,IRADe's research covers these issues, as well as the policies that affect them. IRADe's focus is effective action through multi-disciplinary and multi-stakeholder research, to arrive at implementable solutions for sustainable development and policy research that accounts for the effective governance of techno-economic and socio-cultural issues.

IRADe was established under the Society's Act, in 2002 at New Delhi. It is certified as a Research &Development Organisation by the Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology (MoST), Government of India. It has also been selected as a Centre of Excellence by the Ministry of Urban Development (MoUD), Government of India for urban development and climate change. In addition, it provides expertise to other ministries, national and international institutions and partners with other reputed organisations.

Our Vision

To be a leading Global independent policy research Think Tank that provides and enables implementable policy solutions for sustainable and inclusive development.

Our Mission

To promote development using multi-stakeholder and multi-disciplinary perspectives for decision makers and vulnerable groups in thematic areas of climate change and environment; energy and power systems; sustainable urban development; agriculture and food security; poverty alleviation and gender through policy research and analysis, consensus building & dialogues, capacity building, monitoring and evaluation.





Our Objectives

- Integrate multi-disciplinary and multi-stakeholder perspectives concerning issues of development.
- > Promote wider consensus, through research and analysis, on effective policies.
- Engage and work at local, district, state, national, South Asia regional and global levels.
- Provide research support to developing countries for development and for negotiation process for international agreements.
- Carry out policy research that accounts for the political economy of the society and effectiveness of governance.

Thematic Areas of IRADe

Key Programme areas or thematic areas of IRADe are:

- 1. Climate Change and Environment
- 2. Sustainable Urban Development
- **3. Energy and Power System**
- 4. Poverty Alleviation and Gender
- **5. Agriculture and Food Security**

IRADe's activities in the above areas have cross-cutting themes such as technology assessment and policy reforms.

The key activities are:

- 1. Policy Dialogues and Dissemination
- 2. Training and Capacity Building
- 3. Research and Analysis for Decision Support
- 4. Research in Action, Monitoring and Evaluation Projects





