

Dr. DC Patra, Ph. D
Fellow Energy Institute, London
Chief General Manager, Bharat Petroleum Corporation

January 02, 2020

**Director,
TERI School of Advanced Studies,
Department of Business and Sustainability
New Delhi**

Dear Sir,

Application for
Professor in the Department of Business & Sustainability

With great deal of excitement and academic enthusiasm, I submit my application for the position of Professor in the Department of Business & Sustainability, in TERI SAS.

My aspiration for joining TERI SAS with its interdisciplinary and global orientation, is summarily backed by the following:

- Foundation knowledge of Economics and Public Policy
- Research and publication in the area of Economics, Energy and Environment; also in Philosophy (informal)
- Managerial experience in Energy Industry with intensive learning and diverse exposure, having reached senior leadership position

As a student of Humanities, a professional in Management and as an author in diverse fields, I look forward to add value to the spectrum of teaching and research possibilities at TERI SAS.

My application below is structured in following lines:

- a) Long CV
- b) Statement of Purpose
- c) Research Trajectory
- d) Copy of first page of 5 articles

Thanking you,



DC Patra

Dr. DC Patra – A Profile

Preview

1. *Personal Profile*
2. *Educational Qualification*
3. *Professional Training / Short Term Courses attended*
4. *Publications (Economics, Energy & Environment)*
5. *Work Experience*
6. *Research Experience*
7. *Teaching Experience*
8. *Consultancy Experience*
9. *Overseas Business Exposure*
10. *Membership of Professional Bodies*
11. *Awards and Credentials*
12. *Publications (Books in Philosophy)*
13. *Referees*

1. Personal Profile:

Name	Dr. Debesh C Patra
Address	84/10 Gokuldharm, BPCL Staff Quarters Goregaon (East), Mumbai – 400063 Tel – 022-2879 7122 (Res); 22713300 (Off)
Cell	9820132213
E-Mail	patradc@bharatpetroleum.in ; drdcpatra@gmail.com
Date of Birth	22 nd October 1961
Age	58 + years
Family Profile	<ul style="list-style-type: none">Wife, Krishna, Home MakerSon, Sabyasachi, MS (IS) from Mays Business School, Texas A&M University (May, 2018), of 27 years age, engaged as Security Engineer, Information Security Governance, Delta Airlines, Atlanta, USA

2. Educational Qualification:

Degree	Year	University / Institute	Grade / % marks
Fellow of Energy Institute (FEI)	2018	Energy Institute, London	
Ph. D (Petroleum Economics)	2007	University of Petroleum & Energy Studies (UPES), Dehradun	
Advanced Diploma in Management Research – specialization in Human Resource Management	1999	All India Management Association (AIMA), Centre for Management Education (CME)	
M.A. (Economics)	1983	Utkal University, Bhubaneswar	A +
Materials Management (1 year Certificate Program)	1982-83	Institute of Engineers (India), Odisha State Centre	55.7%
B.A. – Economics Honors & Political Science	1981	Utkal University, Bhubaneswar	First Class with Distinction
HSC	1977	Board of Secondary Education, Odisha	First Division

3. Professional Training / Short Term Courses attended:

Certificate Course / Program	Institute / Organization	Year
'Leading Digital Business Transformation and Innovation' (August 2019 till February 2020), Intensive, engaging, application oriented and multi-pedagogy program; continuing.	Indian School of Business, Hyderabad (Continuing since 1 st August 2019)	2019
'Energy Subsidy Reform', online course conducted by IMF	IMF, on the platform of edX	2019
'Harvard ManageMentor' – e-Learning Program: Modules: 1) Finance essentials; 2) Innovations and Creativity; 3) Customer Focus	Harvard Business Publishing	2016
Business Analytics (4 months week-end class in IIT Bombay)	Sailesh J Meheta School of Management, IIT Bombay	2014

'Harvard ManageMentor' – e-Learning Program	Harvard Business Publishing & Bharat Petroleum Learning Centre	2011
Accredited 'Professional Trainer' at International Accredited Training Professional Program	Specialist Management Resources, Kuala Lumpur, Malaysia	2006
SAP R/3 Training – Level 1 for Location Anchors	ERP Competency Centre, BPCL	2003
Coaching and Mentoring Skills Workshop	International General Electrics (IGE) Training	2003
International Oil Trading and Price Risk Management	Indian School of Petroleum, New Delhi	2002
Advanced Course on WTO	Indian Institute of Foreign Trade (IIFT), New Delhi	2001
Knowledge Management	Tata Management Training Centre (TMTTC), Pune	2001
Understanding the Commercial, Economic and Trading Aspects of Oil Refining	RITOIL Associates, UK	2001
SAP R/3 Application Consultant	Sapient College, Mumbai	2000
International Oil Supply, Transportation, Refining and Trading	The College of Petroleum & Energy Studies (CPES), Oxford, UK	1999
Infrastructure Development & Financing	Indian Institute of Management (IIM), Ahmedabad	1998
Tanker Ownership, Chartering and Operations – Tactics and Decision Making	The College of Petroleum & Energy Studies (CPES), Oxford, UK	1997
Shipping Management	Indian Institute of Management (IIM), Ahmedabad	1996
Industrial Relations	XLRI, Jamshedpur	1995

4. Publications:

a) Peer Reviewed Journals, Trade Journals & Conference Proceedings

Sr. No	Article / Paper	Journal / Conference Proceedings	Year
1	The Integration of Indian Oil Industry with the World Oil Market – A Macroeconomic Pricing Aspect	<i>Management & Labour Studies</i> , XLRI Jamshedpur, Vol. 24, No. 3	1999
2	Building a Customer Focused Organization: An Indian Value Approach – A Case Study of Bharat Petroleum	<i>Udyog Pragati</i> : Special Issue on 'Excellence in Customer Service', National Institute of Industrial Engineering (NITIE), Mumbai.	1999
3	Hydrocarbon Management Model in India – Policy Lessons for Commonwealth Countries	<i>IMM Year Book</i> – 1999 Institute of Marketing & Management, New Delhi	1999
4	Post APM Oil Prices in India: A Macroeconomic Analysis	Proceedings of 3 rd International Oil and Gas Conference & Exhibition, PETROTECH 2001, held at Delhi	2001
5	Can India be a Hub in Global Oil Market?	Proceeding of 8 th India Oil & Gas Review Symposium, Sept. 10 – 11, 2001, Mumbai,	2001
6	Logistics and Transportation of Oil in India	'Transportation Systems: Status and Directions' Papers presented at the National Conference on Transportation	2002

		Systems held at IIT, Delhi, April 24-26, 2002, Phoenix Publishing House Pvt. Ltd, New Delhi	
7	Oil Security for India: Lesson from International Experiences	<i>Oil Asia</i> , International Edition, Vol. 23, No. 2&3, Apr-Jun-Sept. 2002	2002
8	Is India's OPEC Policy in Right Direction?	Proceeding of 9 th India Oil & Gas Review Symposium, Sept. 9 - 10, 2002, Mumbai	2002
9	Globalization in Indian Oil Industry – A Case for Rational Choice	<i>Oil Asia</i> , Vol. 24, No. 1, Jan-Mar. 2003	2003
10	Is Oil Industry a Drain on India's Balance of Payment? A Macroeconomic Perspective	<i>Oil Asia</i> , Vol. 24, No. 2&3, May-Sept. 2003	2003
11	How much Gas would India consume in 2050?	<i>Hydrocarbon Asia</i> , March / April 2005	2005
12	LPG Subsidy in India 2005	<i>Oil Asia</i> , International Edition, Vol. 25, No. 4, Jul-Aug. 2005	2005
13	Retail Marketing of LPG: An Entrepreneurial View, with Special Reference to Mumbai	PATH, by Mathew Thomas (ed.) St. Francis Institute of Management and Research, Mumbai	2006
14	Can there be an Integrated Energy Pricing in India?	Proceedings of 7 th International Oil & Gas Conference and Exhibition at Delhi, PETROTECH 2007	2007
15	Transportation of LPG: A Case Study in Logistics & Economics with Reference to Mumbai City	Proceedings of International Conference on Transportation System Studies, January 10-12, 2008, Walchand Hirachand Unit in Transport Economics, Department of Economics, University of Mumbai	2008
16	Tariff on Petroleum Products: A Case for Fiscal Consolidation in India	'Contemporary Issues in Energy Sector', edited by Dr. Niraj Anand, published by Technology Publications, Dehradun	2009
17	LPG Marketing in India: A Tradeoff between Price & Volume – A Consumer's Perspective	Conference Proceedings of 8 th International Oil & Gas Conference and Exhibition, PETROTECH 2009, held at Delhi	2009
18	Natural Calamities and Economic Development of Orissa	Souvenir, UGC sponsored National Level Seminar on Natural Disaster and its Impact on Indian Economy, Department of Economics, UN College, Soro, Balasore	2009
19	Is LPG a Sustainable Cooking Fuel for India? A Study in Managerial Economics	Conference Proceedings, 'PATHH 2010', 5 th National Research Seminar on 'Innovative Methods adopted for Up-skilling Future Business Managers' by St. Francis Institute of Management and Research, Mumbai in association with Mumbai University, held on 10 th February 2010 at Mumbai, 'The Indian Economic Review 2010', a quarterly journal brought out by Indian Institute of Planning & Management	2010

		(IIPM), in March 2010 issue, Vol VII., pp 110-115	
20	Is a Fuel Price Hike Inevitable?	<i>Business Standard</i> , Mumbai Edition, June 2, 2012, pp. 12	2012
21	Dynamics of Rural Marketing of LPG in India: A Study on Affordability, Accessibility and Welfare	10 th International Oil & Gas Conference and Exhibition, PETROTECH 2012, held at Delhi in October 2012	2012
22	Access and Transition to LPG Cooking Fuel by Households in Rural India: An Assessment of Policy and Action	8th Biannual International 'Advance Workshop on Energy Studies', held at Indra Gandhi institute of Development Research (IGIDR), Mumbai; Published in 'Energy Security & Development – The Global Context & Indian Perspective' Edited by Reddy B.S and Sergio Ulgiati, Springer Publication, Chapter 10, pp. 163 – 182	2012 / 2015
23	India's Energy Scenario in 2013 – Challenges and Prospect	<i>Hydrocarbon Asia</i> , January - March 2013, pp. 6-10	2013
24	Role of Oil Industry in India's Current Account Deficit	<i>UPES Management Review</i> , Vol 2, July-December 2013, pp. 3-13; Abridged version in <i>Petrofed</i> , Journal of Petroleum Federation of India, January-March 2013, pp. 22 - 27	2013
25	Oil Industry Backs the Economy for Revival	<i>Petrofed</i> , Journal of Petroleum Federation of India, July-September 2013, pp. 42 – 44	2013
26	Decoding Energy Inclusiveness for India	<i>Quest</i> , Journal of Management Research, from Chetana's RK Institute of Management & Research, Mumbai, March 2014, pp. 6 – 16; Abridged version in <i>Petrofed</i> , the Journal of Petroleum Federation of India, January – March 2014, pp. 26 – 30	2014
27	Energy Outlook for India 2035	<i>Quest</i> , Journal of Management Research, from Chetana's RK Institute of Management & Research, Mumbai, March 2015, pp. 1 – 6; Reprinted in <i>Petrofed</i> , Journal of Petroleum Federation of India, Jan-Mar 2015, Vol. 14, issue I, pp 18 - 22	2015
28	Decoding Energy Inclusiveness for India 2015'	Proceedings of 9th Biennial International Workshop in Advances in Energy Studies, held at Stockholm, Sweden, on 'Energy and Urban System' May 4-7 2015, pp. 363 – 369	2015
29	Demand and Subsidy Management of LPG in India: An	paper presented in X Annual International Conference on Public	2015

	Empirical Study on Policy Intervention and Outcome	Policy and Management in Indian Institute of Management, Bangalore, held on 3-5 August 2015; Abridged version published in <i>Petrofed</i> , the Journal of Petroleum Federation of India, July – September 2015, pp. 33 – 40	
30	Energy & Environment: Sustainable Policies and Institutions – A Study of India	<i>Quest</i> , Journal of Management Research, from Chetana's RK Institute of Management & Research, Mumbai, March 2016, pp. 35 – 45	2016
31	India Transits to Clean Energy Economy: Where will the differentiated sustainable path lead to?	Proceedings of 23rd World Energy Congress - Research Papers, Volume I, pp. 417 – 434, World Energy Congress Turkish National Committee, 09-13 October 2016, Istanbul Abridged version published in <i>Petrofed</i> , the Journal of Petroleum Federation of India, Oct. – Dec. 2016, pp. 16 – 21	2016
32	Macro-Economic Assessment of Taxes on Petro Products in India: A case for Tax Rate Rationalization and Fiscal Consolidation.	<i>International Journal of Management, IT & Engineering</i> , Vol. 7, Issue 5, May 2017, pp. 34 - 48	2017
33	Energy is About Quality of Life of Bottom of Pyramid People	Conference Proceedings of 22 nd World Petroleum Congress, held 9 – 13 July 2017, at Istanbul	2017
34	Indian LPG Business Delights from the Synergy between Regulations and Technology – Taking Energy Inclusiveness to New Normal',	<i>International Journal of Management, IT & Engineering</i> ', Vol 7, Issue 9, September 2017, pp. 90 – 113. A panel on the paper was exhibited in 30 th World LPG Forum held at Marrakech, during 3-5 October 2017	2017
35	Redefining the Role of Public Sector Undertakings in Oil & Gas Sector in the Post 2017 Era	<i>FIP</i> , Journal of Federation of Indian Petroleum Industry, January – March 2018, Vol 17, Issue I, pp 9 - 13	2018
36	Taxes on Petro Products: Case for Tax Rate Rationalization	<i>Economic & Political Weekly</i> , December 22, 2018, pp. 65 – 69	2018
37	Is Sustainable Energy Transition in India on Track?	<i>Chemical Engineering World</i> , December 2018, pp. 32 – 4	2018
38	Macro-Economic Agenda – Spearheading Energy Inclusion and Front-End Digitization	<i>Inclusion</i> , SKOCH Media, January – March 2019, Vol 8, Issue 4, pp 66 - 71	2019
39	Oil & Gas Sector: Spearheading Energy Inclusion & Front End Digitization	<i>Quest</i> , Journal of Management Research, from Chetana's RK Institute of Management & Research, Mumbai, March 2019, pp. 11 – 19	2019

b) Books

Sr. No	Title	Publisher	Year
1	Where is Oil in National Reforms?	Excel Books, New Delhi	2008
2	Oil Industry in India – Problems and Prospects in Post APM Era	Mittal Publications, New Delhi	2004

5. Work Experience:

Organization	Work Profile / Experience	Year
A. Bharat Petroleum Corporation Ltd, A Maharatna National Oil Company in India A Fortune 500 Company (275 rank) <u>Locations Served:</u> Surat, Kandla, Pune, Goa, Mumbai B. Reserve Bank of India, Mumbai	Operations Management, Sales and Marketing Management, International Trade, Regional Coordination in LPG Marketing Western Region, LPG Sales Coordination & Strategy at Head Quarter Deputy General Manager, Strategy, LPG, Head Quarter, (Apr 2013 to Mar 2017) Current Position: Chief General Manager, In Charge, Corporate Planning (effective 1 st Apr 2017) Economic Assistant, Department of Economic Analysis and Policy, RBI Central Office, Mumbai	1987 till date (32 years, multiple functions in several locations) (1985 – 1987) 2 years

6. Research Experience:

Institute / Organization	Work Profile / Experience	Duration
<ul style="list-style-type: none"> Gokhale Institute of Politics and Economics (GIPE), Pune 	M. Phil Research Student (Monetary Economics) Incomplete	1984-85
<ul style="list-style-type: none"> Department of Economic Analysis and Policy, Reserve Bank of India, Mumbai 	Economic Assistant Division of Fiscal Analysis	1985-1987

7. Teaching Experience (Part time / periodical):

Organization	Work Profile / Experience	Year
<ul style="list-style-type: none"> Naval Academy, INS Mandovi, Goa 	Part time Lecturer in Economics	Spring 1994
<ul style="list-style-type: none"> Institute of Management Studies and Research, Vasco-da-Gama 	Teaching CA Foundation Course Coaching Class	1994
<ul style="list-style-type: none"> Indian School of Petroleum & Energy (ISPe), New Delhi 	Contact classes for Executive MBA and Certified Petroleum Manager, Faculty for Corporate Training Programs	Periodical
<ul style="list-style-type: none"> University of Petroleum & Energy Studies (UPES), Dehradun 	MBA (Oil & Gas) and MBA (Upstream Asset Management) in Petro Economics, as visiting faculty	2006

8. Consultancy Experience:

<ul style="list-style-type: none">Member of a team which carried out a comprehensive study on Commercial and Operations aspect of Ethiopian Petroleum Company in 2000-01 which became basis for restructuring of oil sector in Ethiopia. I was a consultant in deputation to Petroleum India International (PII), Mumbai.
<ul style="list-style-type: none">Worked as a resource person / faculty member for a number of consultancy projects of Indian School of Petroleum & Energy (ISPe), New Delhi

9. Overseas Business / Visit Exposure:

<ul style="list-style-type: none">Made a number of trips abroad
<ul style="list-style-type: none"><u>Countries visited:</u> Republic of Korea (Seoul), Singapore, Qatar (Doha), Dubai, Bangladesh (Dhaka & Chittagong), Ethiopia (Addis Ababa), UK (London & Oxford), Malaysia, Myanmar, Thailand, European Union (France, Germany, Netherland, Italy, Rome), Sweden (Stockholm), Turkey (Istanbul), Ireland (Cork)

10. Membership of Professional Bodies:

Academic / Professional Body	Membership type
<ul style="list-style-type: none">All India Management Association, New Delhi	Graduate Member
<ul style="list-style-type: none">Alumni Association of IIM, Ahmedabad	Life Member
<ul style="list-style-type: none">Steering Committee, 'Cooking for Life' an initiative of World LPG Association, Paris	Member
<ul style="list-style-type: none">Scenario Working Group Member of World Energy Council, London	Member
<ul style="list-style-type: none">Fellow Energy Institute, London	Lifetime
<ul style="list-style-type: none">Member of Columbia University's Centre on Global Energy Policy, New York	Participating Member

11. Awards & Credentials:

<ul style="list-style-type: none">Finalist for 'Petroleum Economist Award 2017 & 2019', under the category 'Energy Executive of the Year'
<ul style="list-style-type: none">Finalist for 'Rising Star Award' S&P Platts Global Energy Award 2019
<ul style="list-style-type: none">Accredited Ph. D external guide and examiner by Universities like: University of Petroleum & Energy Studies, Mumbai University, Sailesh J Meheta School of Management Studies, IIT Bombay
<ul style="list-style-type: none">Awarded in Case Study Writing Competition in Bharat Petroleum 2014 and in 2016.
<ul style="list-style-type: none">Mentored PGPM students of IIM, Indore, Mumbai Campus, in Industry Interface Program (4 months duration), 3 batches: 2016-18, 2017-19 and 2018-20.
<ul style="list-style-type: none">Member, Central Advisory Board of Refining & Petrochemical World Expo, held in Mumbai in February 2019 and continue to remain in the Board for the same Expo, scheduled in March 2020.

12. List of Books Published in Philosophy:

Sr. No	Title	Publisher	Year
1	A Dialogue on Devotion (Compilation & Translation from Bengali)	Sree Guru Anukulashram, Balasore	1987
2	Sri Sri Thakur & Sri N.C. Chatterji (Review & Translation from Bengali)	Sree Guru Anukulashram, Balasore	1988
3	Sri Sri Thakur Anukul Chandra & Deshbandhu Chitta Ranjan Das	Sree Guru Anukulashram, Balasore	1992
4	Sri Sri Thakur Anukul Chandra Speaks to Dr. Phani Bhusan Roy (Review & Translation from Bengali)	Sree Guru Anukulashram, Balasore	1992

5	Sri Sri Thakur Anukul Chandra – The Man, The Messiah	Bibek Bitan, Deoghar	1996
6	Rolling Existence & its Pivot	Kruti Dipti Bahini, Mumbai	2003
7	Destiny Demystified	Institute of Indo-Aryan Studies	2011
8	Religion in Practice: Then, Now and Hence	Asmita Prakashan, Mumbai	2013
9	Beauty and Bliss: Contemporary Works on Sri Sri Thakur Anukul Chandra	Charyashram Prakashan, Deoghar	2016
10	In Search of Life: Sri Sri Thakur Shows Light	Charyashram Prakashan, Deoghar	2019
11	Vishwaguru Mahotsav 1918	Charyashram Prakashan, Deoghar	2019
12	Life, Love and Lift – The Anukul Way	Mittal Publications, New Delhi	2019

13. Referees:

Dr. S Sriraman Retired Professor in Transport Economics, Department of Economics (Autonomous), University of Mumbai Honorary President of Indian School of Political Economy, Pune E-Mail: sriraman_siva@hotmail.com Cell - 9223208948
Dr. Vinish Kathuria Professor, SJM School of Management Indian Institute of Technology Bombay Powai, Mumbai – 400076 E-Mail: vanish.kathuria@gmail.com Tel – 022-25767863 Cell – 9632426787
Dr. S. Mohan Former Director (Human Resources), Bharat Petroleum Corporation Ltd, Former Visiting Professor, IIM, Ahmedabad 402, HB-3, Suryanagara Sun City Phase I, Chandpura Bangalore - 560099 E-Mail: smohan.100@gmail.com Cell – 9632426787



Dr. DC Patra – Energy Executive Excelled in Policy Advocacy and Strategy Formulation

If execution is the key, visualization is the keyboard for energy policy. Energy industry world over is passing through a prolonged period of transition, being beset with tasks like de-carbonization, de-subsidization and decentralization. Disruptive forces like technology innovation and legislation have forced energy executives to think differently. The transition presents itself with dilemma and enigma for low energy consuming and low income (per capita basis) country like India. India is a country of huge significance from the point of view of quality of life of one sixth of world population.

The fastest growing economy, the third largest energy consuming country and fourth highest emitter of carbon dioxide in the world, India has narrow room for maneuverability to adopt alternate energy. Dr. DC Patra visualized the likely scenarios to emerge in India's energy horizon and articulated policy path from time to time.

• Dr. DC Patra's Advocacy of India's Energy Transition

Sixty eight percent of greenhouse gas emitted gets generated from energy sector in India. The country is on way to strike fine balancing acts, unique to itself, while dealing with issues of energy security, energy equity and sustainability. India has taken leadership position in global drive to mitigate climate change. Dr. Patra has been advocating ways and means for eradication of energy poverty and bringing about energy inclusiveness in India. He has been assessing progress in India's green energy initiatives, with specific reference to India's commitment to United Nation's Convention on Climate Change, COP 21, held at Paris in 2015.

In '23rd World Energy Congress' held in October 2016 at Istanbul, Dr. Patra presented his paper, 'India Transits to Clean Energy Economy: Where Will the Differentiated Sustainable Path Lead to?' Dr. Patra analyzed India's management of energy and climate change and assessed India's performance with the framework of 'Energy Trilemma' (of World Energy Council), giving primacy to 'sustainability', without compromising 'security' and 'equity'. In '22nd World Petroleum Congress' held in July 2017 at Istanbul, Dr. Patra presented his paper, 'Energy is about quality of life of bottom of pyramid people'. Juxtaposing energy equity indicators with quality of life economic indicators of some select countries, Dr. Patra asserted: a) countries on low energy equity scale are the ones having high economic poverty; b) countries in which energy equity indicators are improving overtime are the ones providing better quality of life for people.

In 'Energy Systems Conference' held in June 2018 at London, by 'Elsevier' in association with 'Energy Institute', Dr. Patra addressed on 'Is Sustainable Energy Transition in India on Track?' His views were:

- a. *India has indeed embarked on the path of sustainable energy transition, very much in synch with global trend.*
- b. *However, the complexities of India's socio-economic status and resource endowment have not allowed India to make a radical shift.*
- c. *Last four years have witnessed a massive thrust in right direction and results are visible in the form of green shoots.*

- **Dr. DC Patra's Insight into and Prognostication for India's Oil & Gas Industry**

Way back at the dawn of the century, at the height of drive for reforms in Oil & Gas sector in India, Dr. Patra argued that the policy of dismantling administered pricing of petroleum products would not be feasible. His paper 'The Integration of the Indian Oil Industry with the World Oil Market – A Macroeconomic Pricing Aspect', was published in a peer reviewed journal 'Management & Labour Studies', published by XLRI Jamshedpur. Dr. Patra's foreboding did bear fruition and the process of dismantling of administered pricing of auto fuels got protracted and remained problematic. Dr. Patra then could foresee volatility of petroleum product prices getting imported and impacting the selling price in domestic market, which is price sensitive.

In '8th India Oil & Gas Review Symposium', held in September 2001 at Mumbai, Dr. Patra argued that India had all the physical and financial favorable conditions to become a hub in oil refining. Today, India's oil and gas refining and marketing has come long way towards materialization of that view of Dr. Patra

- **Dr. DC Patra's Involvement in International Energy Forums**

Dr. Patra's involvement in international energy forums includes being member of 'Scenario Planning Group' of 'World Energy Council' and participatory member of 'Columbia University's Centre on Global Energy Policy'.

Since 2018 January, Dr. Patra is 'Fellow Energy Institute', London.

Dr. Patra has been a practicing energy economist. He represented India and presented paper in 'Biennial International Workshop on Advances in Energy Studies', held in Stockholm in May 2015.

- **Dr. DC Patra's Academic Contribution and Teaching**

A Master in Economics (1983), Dr. Patra secured Ph.D. in 'Petroleum Economics' from 'University of Petroleum & Energy Studies', Dehradun (2007). Dr. Patra so far has authored 2 books and published 40 papers in journals and conference proceedings on topics like energy, economics and environment.

Dr. Patra maintains close interface with academic bodies. He mentored Post Graduate Program in Management (PGPM) students of IIM, Indore, Mumbai Campus, in Industry Interface Program (4 months duration), 3 batches: 2016-18, 2017-19 and 2018-20.

Dr. Patra was in the Central Advisory Board of Refining & Petrochemical World Expo, held in Mumbai in February 2019 and remains in the Board for the same Expo, scheduled in March 2020.

Dr. DC Patra has contributed to teaching and to body of literature in the area of Oil & Gas. He has taken classes in the training programs of Indian School of Petroleum and Energy, New Delhi and in the classroom of University of Petroleum and Energy Studies, Dehradun. Dr. Patra's classes in management schools and in Corporate Houses holds out the abstractions of market forces in the mental picture of the students. Dr. Patra goes to the basics of the subject while teaching and brings real life cases into the class rooms. Igniting minds of the students and unlocking the boundaries are the basic features of Dr. Patra's

teaching style. Quantitative examples, info-graphics and application oriented examples are often used tools in Dr. Patra's teaching aids.

- **Dr. DC Patra – A Senior Executive in BPCL**

With three decades of working experience in downstream oil and gas Industry, Dr. DC Patra is Chief General Manager in charge, 'Corporate Planning' in Bharat Petroleum Corporation Limited (BPCL) since April 2017. He oversees BPCL's capital budgeting, capital expenditure monitoring, BPCL's interface with Government of India and with Parliament. Dr. Patra's role also involves presenting BPCL in external forums.

In his previous role (2010-2016), Dr. Patra headed 'Strategy' function in LPG business for five years. During this tenure, India undertook two pioneering and hugely successful initiatives on national scale. One is: Direct Benefit Transfer of LPG (DBTL), for which India was applauded by Guinness World Record. And the second one is: *Prime Minister's Ujjwala Yojana* (PMUY), which was instrumental in raising LPG penetration in the country as cooking fuel up to 90%. These were highlighted in a document by World LPG Forum, in which Dr. Patra is a contributor, amongst others from across the globe. (*World LPG Forum, 2017 'LPG Policy Document: An analysis of why and how governments encourage the use of LPG in the domestic sectors using examples of policy from a selection of countries*)

- **Conclusion**

An accomplished Energy Executive of long credential, with innovative approach, Dr. Patra is an avid researcher, prolific author and public policy analyst, with passion for igniting minds and building personalities.

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Statement of Research Trajectory

Dr. DC Patra

Research Milestones

M. Phil in Monetary Economics
Gokhale Institute of Politics & Economics,
Pune, 1984-85

Economic Assistant,
Dept of Economic Analysis and Policy, RBI,
Mumbai, 1985-1987

1st Book 'Oil Industry in India – Problems
and Prospects in Post APM Era', Mittal
Publications, 2004

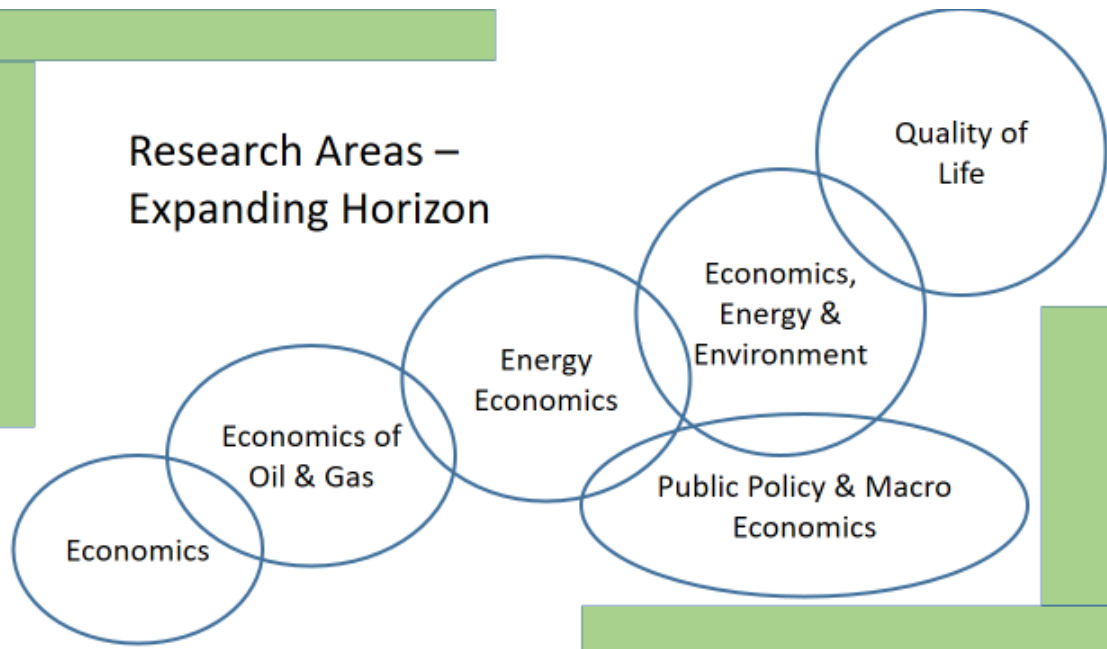
Ph. D in 'Petroleum Economics' from
University of Petroleum & Energy Studies,
Dehradun, 2007

2nd Book, 'Where is Oil in National
Reforms?' Excel Books, 2008

Presented papers in International
Conferences in Stockholm, Istanbul and
London, during 2015-2018

Fellow Energy Institute, London in 2018

Research Areas – Expanding Horizon



Taxes on Petro Products Case for Tax Rate Rationalisation

D C PATRA

Petro products are price-sensitive, as these constitute key inputs to private consumption, industrial production, and public transportation. Petro prices have global linkage and exhibit high volatility. A quantitative and historical analysis of taxes on petroleum products in India, which is largely import-dependent, is undertaken, as the tax component constitutes 40%–50% of the retail price. During 2015–16 and 2016–17, the government could have reduced tax rates on petrol and diesel, but it did not, probably because of the wider considerations of fiscal balance and development imperatives.

Tax on petroleum products constitutes a significant fiscal instrument. Besides being items of revenue receipt for the central and state government exchequer, taxes on petroleum products are cost items to producers. Producers pass these on to customers; therefore, taxes on petro products add to the selling price of end products.

For every government, petroleum products are easy objects of taxation, as these products are taxed in bulk at the supply sources, and taxes are paid by marketers, who are always limited in number. As petroleum products are liquid or gaseous, and are hazardous, these have a well-defined supply chain, and well-structured documents make tax avoidance difficult. Some of the milestone supply links become easily identifiable points of tax collection.

Petroleum products are items of essential consumption. In the short run, these products do not have substitutes. Therefore, petroleum products have low price elasticity of demand, and it is easy to revise tax rates. That brings buoyancy to revenue collection. From the consumer's perspective, taxes on petroleum products are unavoidable, and the incidence of taxes on petroleum products pinches the homemaker's monthly budget; therefore, the price sensitivity of petroleum products is usually pronounced in the market easily, and the market reaction attracts media attention.

This article attempts to study taxes on petroleum products from the macro-economic and public finance perspective and answer four questions.

(i) What is the structure of petro taxes considering major products, applications, and customer profiles?

(ii) What is the extent of revenue generation role that petro taxes have played in the historical view, including the element of subsidy?

(iii) What percentage of the end user's price on some select products do petro taxes constitute?

(iv) How have the price indices of select petroleum products behaved?

The article brings out that petro products provided substantial support to the state exchequer on a sustained basis. The other side of the view that emerges from this study of 35 years is that the consumer, typically at the receiving end, has not had the best deal always. During 2015–16 and 2016–17, it was within the realm of possibility to lighten the tax burden on the consumer while maintaining revenue neutrality for the exchequer. That would have perhaps helped to make the tax structure more equitable as indirect taxes, by definition, are regressive in nature.

Consumption

Marketing of petroleum products has been largely regulated in India; however, marketing of specific petroleum products has been deregulated at different times by altering policy regulations and institutional arrangements. Private companies have come to operate in the market along the entire value chain—upstream, mid-stream, and downstream, and in different degrees and proportions—and these are seen to be more active in the refining segment.

Of the 252 million metric tonnes (MMT) of crude oil processed in the country during 2017–18, private refineries processed 91.2 MMT (36%) and jointly owned refineries processed 15.5 MMT (6%). In 2017–18, the central public sector undertakings (PSUs) together supplied 77% of the total consumption; private companies supplied the remaining 23%. Of this total consumption of about 202 MMT, 14% (28.3 MMT) is comprised of petro coke (21 MMT) and naphtha (7.3 MMT), which are used for industrial applications and are supplied in bulk. The private sector's market share marginally increased by 0.2% in 2017–18 (from 22.4 MMT out of total sales of 194.6 MMT in 2016–17). Retail marketing of petro products remains largely in the hands of central PSUs, in an oligopolistic

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DEMAND & SUBSIDY MANAGEMENT OF LPG IN INDIA: AN EMPIRICAL STUDY ON POLICY INTERVENTION AND OUTCOME

(Paper presented in 10th International Conference on Public Policy, conducted by Indian Institute of Management, Bangalore during 3 – 4 August 2015)

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Abstract

The recent spurt in literature on issue of subsidy on LPG in India suggest: a) the practice of universally applicable and open-ended subsidy is unsustainable, particularly in the scenario when procurement cost is rising in international market, with strengthening of dollar, and widening of fiscal-deficit, which coupled with supply-side constraints in the economy, fuels inflationary spiral. b) Subsidy on merit goods like LPG has to be targeted to beneficiaries, who are below a threshold level of income. c) Subsidy amount has to be transferred to the beneficiary's account directly to avoid leakage. And lastly, d) such direct transfer would be a step towards market determined prices and thus would ensure optimum allocation of resources.

This study is an attempt to evaluate the impact of these different policy interventions/instruments on a) LPG demand; and b) the corresponding subsidy. The study also attempts to assess customer's experience of the above process.

The study using monthly sales data of LPG from April 2009 to March 2015 to both domestic and commercial segments of Bharat Petroleum Company finds differential impact of policy intervention with residence segment getting negatively affected by the intervention (as expected) and positively affecting the commercial demand (again a positive impact and as per the expectation).

Key words: LPG, Subsidy, Reform, India



ENERGY IS ABOUT QUALITY OF LIFE OF BOTTOM OF PYRAMIND PEOPLE

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[Author presented this paper in 22nd World Petroleum Congress, held in Istanbul, Turkey on 11th July 2017]

ABSTRACT

Large ground has been covered in literature and in public policy debate about role of energy in sustainable development and climate change. The issues of energy supply security, energy access and affordability, improving energy efficiency and managing demand, while decarbonizing the energy sector, have brought focus on coherent and predictable energy policy, stable regulatory and legal framework for long term investment and innovation.

Amidst plethora of objectives being advocated, this paper argues that securing energy equity stands at the front-end of national objectives, particularly for developing countries. Energy equity has been defined as having accessibility and affordability of energy supply across the population. Irrespective of the quantum of energy supply and consumption trend in a developing country, the lack of access to adequate and affordable energy contributes to and is supported by poverty. People who lack access to cleaner and affordable energy are often trapped in a reinforcing cycle of deprivation.

This paper hypothesizes that energy equity has to be the frontline objective. Other two objectives like energy security and sustainability add balancing value to that. Policy regulation and technology have to be oriented towards alleviation of energy poverty.

India Transits to Clean Energy Economy: Where will the differentiated sustainable path lead to?

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(Paper presented in 23rd World Energy Congress, held at Istanbul during 9 – 13 October 2016)

Abstract

India is in the midst of a multi pronged transition on energy front. A country of 1.25 billion people is on the move with compelling aspiration for better life. There is quest for quality of life that is free from the shackles of the past. A young demography is looking for dignity and development, within democratic polity.

The process of development is constrained by two factors: a) energy and b) environment. Within these two boundaries, there are issues of: a) energy equity, b) energy security and c) environmental sustainability; the 'trilemma' monitored by World Energy Council.

India is heading towards centre stage in world energy landscape, by virtue of its growing size, complexity, diversity of energy basket, linkage with other countries by way of trade, technology transfer and destination for investment. India is poised to be a major market of solar energy, as it will play a significant role in world's commitment to reduce green house gas emission.

In an academic exercise to assess the transition happening in oil industry in India, with focus on recent developments, D C PATRA finds out that the Indian oil and gas sector has registered phenomenal growth in both production and consumption.

Two sterling developments stand out from the myriad of initiatives undertaken in oil and gas segment during past five years of BJP led NDA regime at the Centre. Oil and gas sector during these years, witnessed initiatives that went far beyond the zone of business; skirting issues like energy security, liberation from socio-economic deprivation for bottom of pyramid section, correcting regional imbalance through infrastructure network, asserting geopolitical hegemony through oil diplomacy and arresting climate change through adopting low carbon energy sources. Each of these, and some more, initiatives emanated from deep concern for the fundamentals of India's socio-economic imperatives and an abiding faith that Oil Industry in India, primarily constituted by Oil PSUs, can carry the torch of change from concept to conclusion.

Fundamental shift has taken place in the following two areas:

1. Petroleum products consumption became more inclusive. Petroleum products used for personal and household necessities, like

transportation and cooking, got penetrated into deeper areas, riding on favourable factors like availability, accessibility and affordability.

2. Business interface with customers became more digitised, resulting in better service, satisfied customer experience and lower cash transaction.

INCLUSIVE CONSUMPTION

Petroleum products consumption became more inclusive during past four years, as indicated by two variables:

- a. Per capita consumption of petroleum products increased

faster than that experienced in previous years.

- b. Increase in per capita consumption became wide spread. States historically having lower per capita consumption experienced proportionately higher increase than states having historically high per capita consumption.

Table 1 presents all India per capita consumption of Petroleum Products and its annual growth pattern during different phases.

Per capita consumption grew the fastest at 7.3 per cent CAGR during past 4 years, taking 2013-14 as the base year. When we extend the base year back by 5-years, that is up to 2008-09, then the CAGR got reduced to 3.8 per cent. Further backward extension of the base year by 3 more years, CAGR was reduced further to 2.45 per cent.

Annual data shown in Exhibit 1 and in Figure 1 bring out that consumption of petroleum products per capita experienced a fall during 2007-08 to 2009-10 and marginal increase in 2013-14.

State wise analysis done in Table 2 reveal that states having lower than national level in 2013-14 per capita consumption (9 out of 28 states taken for the analysis) had higher share of

Table 1: Summary of All India per capita consumption of petroleum products

Year	Per capita consumption of petroleum products
2005-06	111.7 Kg
2008-09	105.9 Kg
2013-14	122.6 Kg
2017-18	148.6 Kg
CAGR during 2013-14 to 2017-18	7.31 %
CAGR during 2008-09 to 2017-18	3.80 %
CAGR during 2005-06 to 2017-18	2.45 %