Energy Transition:
Need for fundamental rethink of taxation policy

Prayas (Energy Group)

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Prayas (Initiatives in Health, Energy, Learning and Parenthood) is a non Governmental, non-profit organization based in Pune, India. Members of Prayas are professionals working to protect and promote the public interest in general, and interests of the disadvantaged sections of the society, in particular. Prayas (Energy Group) works on theoretical, conceptual regulatory and policy issues in the energy and electricity sectors. Our activities cover research and intervention in policy and regulatory areas, as well as training, awareness, and support to civil society groups. Prayas (Energy Group) has contributed in the energy sector policy development as part of several official committees constituted by Ministries and Planning Commission. Prayas is registered as SIRO (Scientific and Industrial Research Organization) with Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India.

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Introduction

As of 22nd March 2022, international crude oil prices are well above $ 100/barrel and given India's long standing dependency (>85%) on oil imports, this has serious implications for the economy, more so given the need for an economic recovery post pandemic. According to one expert, the increase in India's import bill for oil, gas, coal and fertilisers could rise by $ 100 billion (~3% of GDP) in FY 2022-23 if these high prices sustain for a while. This has pressing linkages to macro-economic aspects like balance of payments, inflation and a weakening rupee. While higher prices for conventional fuels will further accelerate the energy transition in the short term, it also reduces access and use of modern forms of energy thereby reducing productivity and quality of life.

One critical dimension of energy pricing which assumes even greater importance as the energy transition gathers momentum is 'energy taxation' and its impact on public finance. As the energy sector gradually moves away from fossil fuels and shifts towards a greater share of renewables and greater electrification of end-uses, energy tax revenues will come under strain. While the comprehensive transformation away from fossil fuels is likely to take place over the next few decades, the attendant reform in the tax regime is also likely to be very complex and involve nuanced political negotiations. Therefore, it is important to anticipate the fiscal challenges that may arise out of the transition and prepare for it. Prayas (Energy Group) made a start in this regard by publishing a working paper, 'Energy: Taxes and Transition in India' in February 2021 coupled with a panel discussion which critically discussed this issue at length and laid out preliminary suggestions on a way forward while appreciating the continued need for serious research on this topic.

This policy brief continues our exploration of this topic and builds on the earlier working paper. While this policy brief focuses on the energy sector given its critical role in public finance, it is clear that the country would need to prepare for a gradual transformation of the taxation regime, going beyond just the energy sector or even just indirect taxes. This can ensure a much smoother and effective energy transition while maintaining public revenues.

For this policy brief, we have expanded our dataset to cover a period of four years, from FY 2018 to FY 2021, in order to better observe and identify trends. This entire cleaned up data is being made publicly available for other researchers to easily access and contribute to this area of work, even as we continue to explore it further. The data sources, methodology and any assumptions are detailed in the dataset itself.

An analysis of energy sector revenues

Increasing dependence on energy taxation

As identified in the working paper, fossil fuels continue to be a significant contributor to the overall revenue of India's central and state governments. This revenue predominantly comes from the petroleum (& natural gas) and coal sectors, which contributed about Rs. 7.25 lakh crore of the total Rs. 7.7 lakh crore revenue from the energy sector in 2020-21. The Centre and states are quite dependent on the energy sector for their taxation revenues (panel 1 in fig 1), with the Centre's dependence reaching a high of 34.5% in FY 21 from

the average of 25% between FY 18-20. The state's dependence has been lower at roughly 14% over the last four financial years. Energy's contribution in the non-tax revenues (panel 2 in fig 1) was always much lower than tax revenues and has been dropping over the last four financial years, both for the Centre and states. In terms of the energy sector's contribution to total revenue receipts as seen in the last panel in the graph, the Centre's share has gone up from 21.2% to 27.1% while the states' share has gone down marginally from 11.3% to 10.3% from FY 18 to FY 21.

Figure 1: Share of energy in tax, non-tax and total revenue of Centre and States.

Source: Prayas (Energy Group) analysis based on various sources[1]

Petroleum's contribution much larger than coal or electricity

At Rs 647,926 crore in FY 20-21, the petroleum sector's contribution to the combined Central and State exchequer was 8.3 times the contribution from coal (Rs 77,844 crore) and 13.5 times the total electricity duty contribution (Rs 48,142 crore). However, FY 20-21 was a slight outlier in terms of very high petroleum taxes as compared to the earlier three years when the ratio of petroleum to coal contribution to the exchequer averaged just above six. Figures 2 and 3 show the disproportionate contribution from the petroleum sector to the overall revenues from energy.

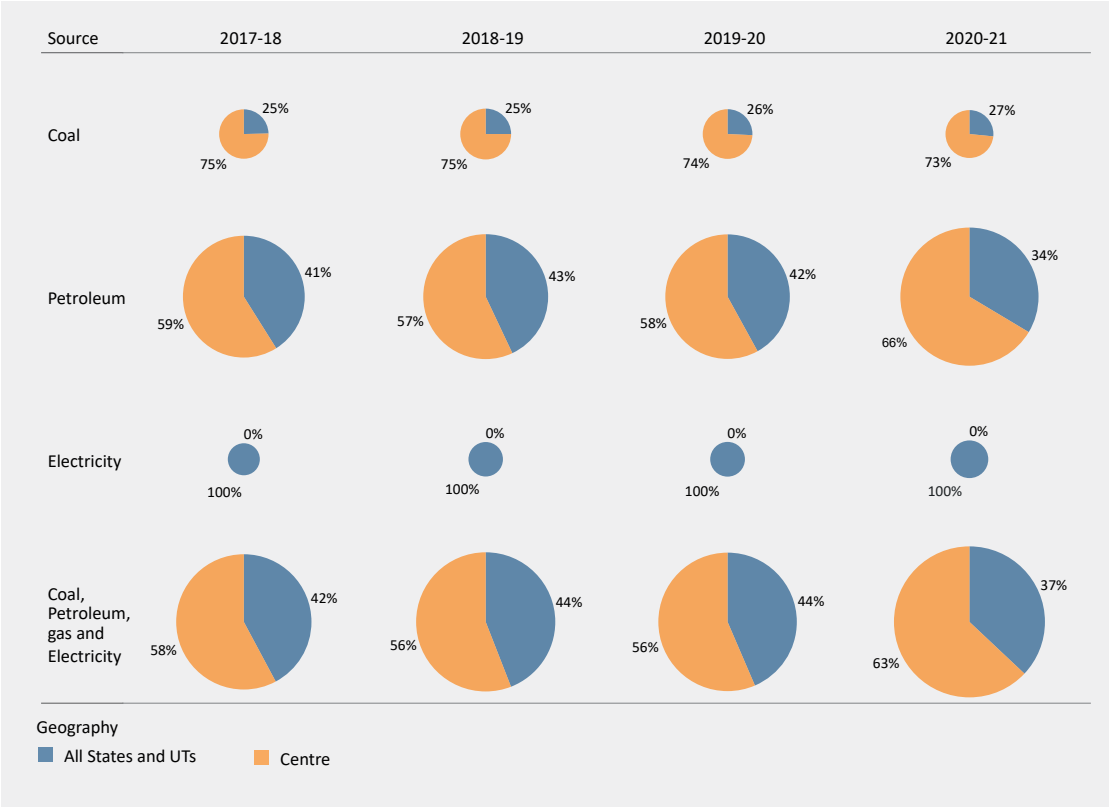
However, again the difference in the relative importance of petroleum and coal to the Central and state exchequers is quite stark. From FY 18-21, on average the petroleum sector contributed just over five times the revenue as compared to the coal sector for the

1. Please refer to the data files published for details of the various sources

central exchequer. However, looking at the combined revenue of all states, the petroleum sector contributed more than 10 times the revenue from the coal sector in the same period[2].

Figure 2 also shows that the Centre's share in total energy revenues has been growing over time, from 58% in FY 18 to 63% in FY 21.

Figure 2: Contribution of petroleum, coal and electricity



Source: Prayas (Energy Group) analysis based on various sources

Note: The size of the pie charts in the above graph is indicative of the corresponding revenue.

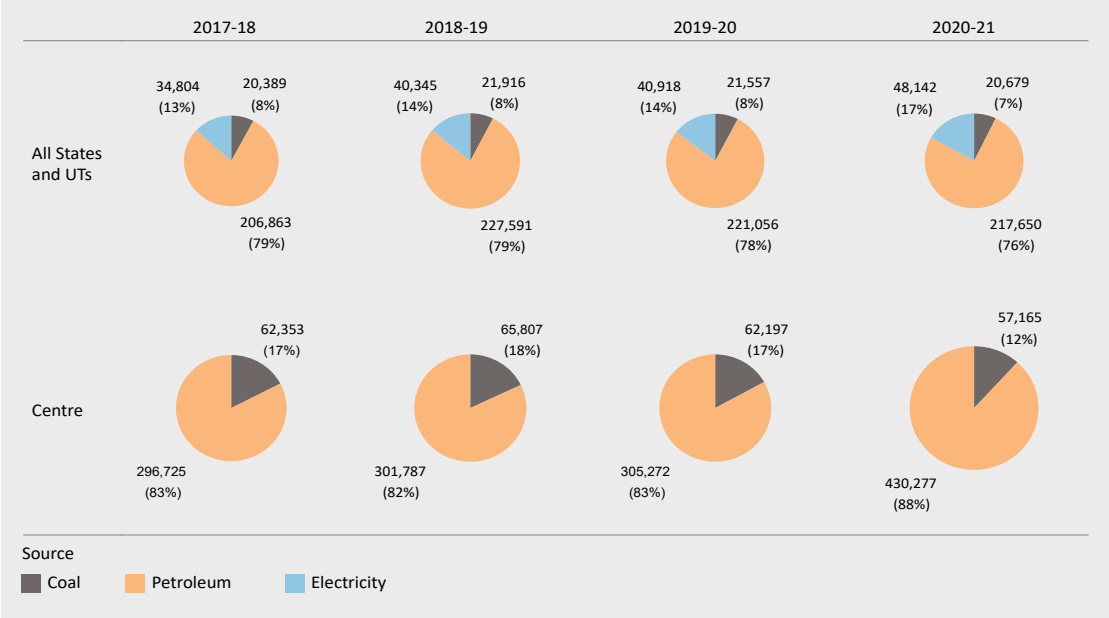
Source and instrument wise contribution to Centre and States

As seen in figure 3, revenues from electricity[3] in the form of duties, completely go to the states' exchequer as electricity is not (yet) part of the GST framework. They have been growing steadily from Rs 34,834 crore in FY 18 to Rs 48,142 crore in FY 21, thereby increasing the contribution of the electricity sector in the states' energy revenue from 13% to 17% in the same period. The relative importance of coal revenues has been reducing for both the Centre and States, with coal's share in Central energy revenues dropping from 17% to 12% while states have seen a minor drop from 8% to 7%. While the share of petroleum in states' energy revenues dropped from 79% to 76%, its share in the Centre's energy revenues went up from 83% to 88%.

2. The relative roles of coal and petroleum may be different for coal-bearing states.

3. Some states like Maharashtra levy a tax on the sale of electricity in addition to the duty. Revenues from such taxes have not been considered in our methodology in this version.

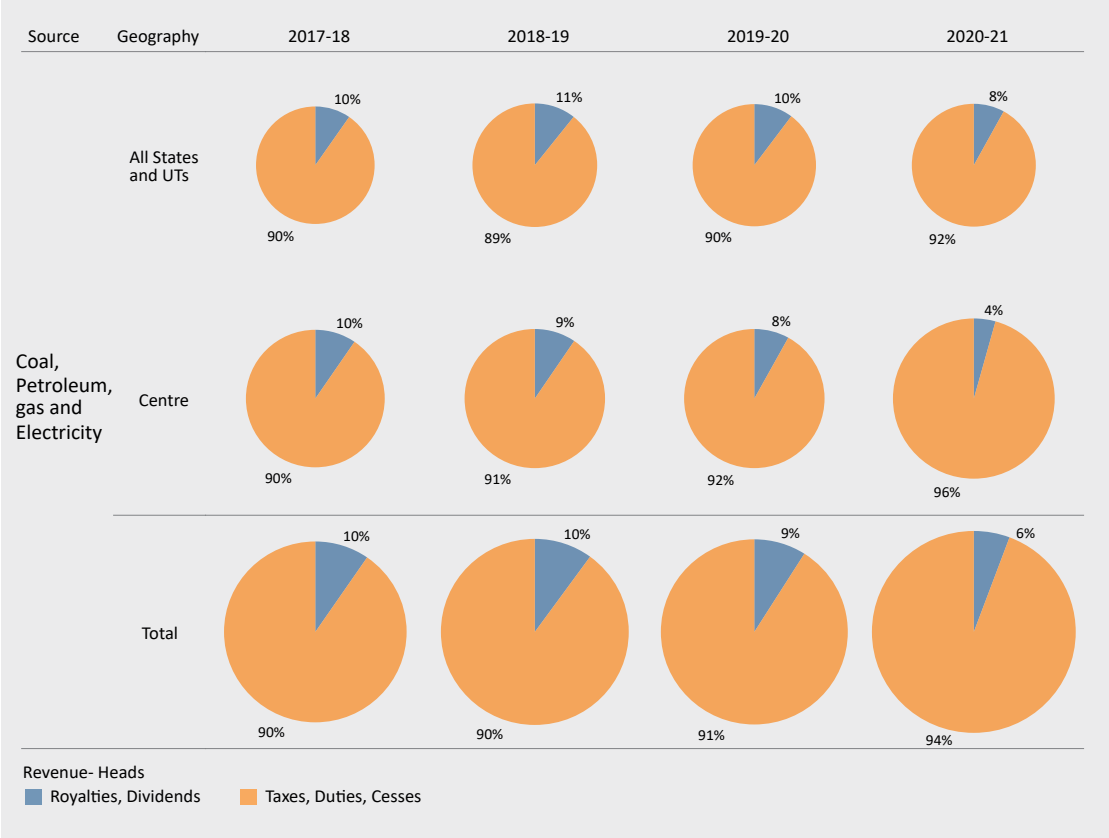
Figure 3: Source wise revenue for Centre and States



Source: Prayas (Energy Group) analysis based on various sources

Note: The size of the pie charts in the above graph is indicative of the corresponding revenue. Figures in Rs crore (share in % in brackets)

Figure 4: Relative contribution of tax (Taxes, duties and cesses) and non-tax (royalties, dividends) revenue



Source: Prayas (Energy Group) analysis based on various sources.

Note: The size of the pie charts in the above graph are indicative of the corresponding revenue.

In terms of the types of instruments and their contributions, for the Centre in both coal and petroleum, the share of taxes, duties and cesses is on average ~90% (FY 2018-21) of the total coal and petroleum contribution and royalties and dividends make up the rest. For states, it's the reverse in coal with royalties and dividends making up just over 75% on average of the total coal contribution. However, it's the same story in petroleum with the share of taxes, duties and cesses at ~95% of the total on average for FY 2018-21.

Energy Transition, ever accelerating

India has announced[4] ambitious goals for 2030 at the recently concluded Conference of Parties (COP 26) in November 2021 wherein it has committed to 500 GW of non-fossil fuel electricity generation capacity and meeting 50% of its energy requirements from renewable energy by 2030 amongst other goals. Thus, the share of renewables (including large hydro) is set to increase rapidly from the present (2020-21) 22% to nearly 50% by the end of the decade. This will have implications for growth in the demand for coal for power generation. Further the announcement of the hydrogen mission and the green hydrogen policy can have further implications for coal use in the steel and cement industry but that impact may be very limited by 2030.

Apart from the mainstreaming of renewables in the electricity sector, another accelerating trend is the shift to electric mobility. Several states have final and draft EV policies in place with aggressive targets and additional subsidies and tax waivers for the short-medium term. Sales of electric two and three wheelers have shot up in the last few months driven by various factors such as the high fuel prices, low running costs of EVs, improving battery ranges, direct subsidies for EVs by the Centre and States, income tax deduction and concessional taxes (GST and State taxes) on EVs. Though starting from a small base, EV sales are growing at 100% a year in contrast to the rather tepid growth in other vehicle types. While this augurs well for the EV industry, it will certainly have concomitant implications for transport fuel demand and hence revenue collection from vehicle and fuel taxes and duties[5]. This trend is only likely to accelerate given government targets, oil price uncertainty, and falling prices and improving reliability of batteries.

Another emerging aspect of mobility is the push towards enhanced use of biofuels, specifically ethanol blending in petrol. As of February 2022, the all India ethanol blending stood at just over 9% and the Centre is confident of meeting the 20% by 2025 target. To further encourage ethanol blending, the recent budget (2022-23) has announced an additional excise duty of Rs 2/litre for unblended fuels. This is on top of the reduction in GST on ethanol meant for Ethanol Blended Petrol from 18% to 5% in December 2021. While these targets and tax nudges will certainly increase the procurement of ethanol and thereby marginally reduce imported oil dependency, it also opens up a plethora of

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4. https://www.mea.gov.in/Speeches-Statements.htm?dtl/34466/National+Statement+by+Prime+Minister+Shri+Narendra+Modi+at+COP26+Summit+in+Glasgow

5. Relevant excerpts from the 316th Parliamentary Standing Committee on Industry's report on Demands for Grants (2022-23) Pertaining to the Ministry of Heavy Industries.

   "The Committee further desires that Phase II of FAME scheme be extended beyond March 31, 2024 so that the targets set under the Scheme can be achieved, along with an announcement for new incentives like tax rebates and cut on duties on Electric Vehicles which would accelerate Electric mobility.

   The Committee is of the view that the manufacturers would need the support from Government on a longer term i.e until the EV market becomes self-sustainable, more affordable and within the reach of common man".

critical questions which have not yet received the attention they deserve. Most of ethanol produced in India today is from sugarcane which is by far one of the most water-intensive crops. While a lot of the sugarcane is irrigated from canal-based irrigation, a large share of the subsidized electricity use in agriculture is also taken up by sugarcane. Finally, while the government does not decide ethanol prices for second generation ethanol (2G) and grain-based ethanol, the procurement price for ethanol derived from different sugarcane based raw materials varies from Rs 46.66-63.45 / litre. This is significantly higher than the Rs 30-35/litre charged to the dealer for MS (petrol). A Rs 20/litre higher procurement price for ethanol roughly translates to Rs 10,000 crore for the 4.6 billion litres of ethanol required for a 10% blend in FY 21-22. This would go up to ~ Rs 22,800 crore by FY 24-25 considering the 20% blend and corresponding ethanol requirement of ~11 billion litres. Several such aspects need to be considered while taking a long term view of the future of biofuels in the mobility sector.

Way forward and some specific next steps

The data above clearly brings out the ever-growing dependence of the country on revenues from the energy sector. Thus, there is a need for a deeper understanding of the role of the energy sector in the country's public finance, and how this is likely to be impacted with the energy transition. A starting point is to commence discussions on a gradual transformation of the taxation regime, going beyond just the energy sector or even just indirect taxes. This can help identify suitable fiscal alternatives and taxation regimes to ensure that public revenue streams can be suitably reworked as the structure of the energy and mobility sector undergoes transition. Some specific next steps which would assist in this journey are noted below.

1. ***Energy Transition scenarios based on modelling:*** Most current studies[6] project ever-growing future revenues from fossil fuels based on past trends, and do not fully account for the energy transition taking place. Hence there is a need to analyse possible future energy transition pathways with increasing share of renewables, energy storage (particularly batteries), electric mobility, green hydrogen, changing demand patterns etc. and understand the implications of such scenarios on tax and non-tax revenues of the Centre and States.

2. ***Need for greater state-level analysis:*** Different states are dependent on the energy sector to different extents (See Table 2 in Annexure) and the energy transition is also likely to proceed at a different pace in various states. Therefore, the positive and negative impacts of the transition on each state are likely to be quite different and calls for better state-specific analyses. State governments where the transition may be fastest (for example Tamil Nadu, Maharashtra, Gujarat, Delhi) can take the lead in this regard.

3. ***Building transparency on energy taxes, cesses and its use:*** Data collection (on energy taxes, duties, cesses, royalties, dividends etc.) for this research was not easy and was quite time consuming. The information is either not available, not easily

6. Projection of Tax Revenue on Petroleum products and Sales Tax and State's Own Tax Revenue (SOTR) Effort Analysis of States in India, Centre of Excellence in Fiscal Policy and Taxation (CEFT), Xavier University, Bhubaneswar, 2019. Mukherjee, S. (2019). Estimation and Projection of Petroleum Demand and Tax Collection from Petroleum Sector in India. New Delhi: National Institute of Public Finance and Policy.

accessible or is available in a scattered form. Moreover, it is not clear whether all the agencies reporting such data use consistent definitions of how taxes are accounted for. However, public access to such information is critical to have a meaningful public discourse on the topic. Therefore, Central and State governments in collaboration with research groups/CSOs should work towards setting up a publicly accessible database containing details of energy sector related taxation, subsidies and other revenues and expenditures, to enable rich independent research that can aid the policy process. As part of this, the budget documents of the Centre and States could consider a new consolidated section on energy sector taxes, subsidies and finance. A starting template could be developed by research groups.

Similarly, tracking the use and spending of monies collected for specific purposes is equally important. As an example, the Maharashtra Green Cess Fund was instituted through a tax on the sale of electricity to Commercial & Industrial consumers and collected Rs 2,315 crore (2008-15) of which only Rs 112 crore were utilised for the intended purpose of the cess, namely renewable energy development. This information was not easily available in the public domain. This is similar to the erstwhile National Clean Energy/Environment Fund through the cess on coal which has now become the GST compensation cess.

4. ***Energy products and GST:*** Several energy products (diesel, petrol, ATF, natural gas and crude oil) and electricity are outside the GST framework. There has been a continuing discourse on the need and practicality of bringing these under the GST framework[7]. Evolving principles to include these in the GST framework would either mean exceptions to the GST rates or higher GST rates for all other products to maintain revenue neutrality for the states and Centre, along with more sophisticated ways of sharing revenue with states[8]. While experts and industry associations have highlighted the benefits of this move for consumers and the Indian economy, this would need significant consensus building and political commitment from States.

   Thus, there is an urgent need for a critical discourse on the future principles of energy pricing and taxation which not only respects federalism but also seeks to balance various conflicting objectives. On the one hand, the objective of increasing energy consumption, particularly among India's poorer classes, would require lower energy taxes or higher energy subsidies. But this has to be balanced with the need to ensure that public revenue to the Centre and states is not unduly affected. Moreover, there is also an argument that energy products such as diesel and electricity, which are used as productive inputs, should not be taxed heavily so as to prevent undue inflation. Internalising the social and environmental externalities of fossil fuels would mean higher Pigouvian taxes on them, raising their prices. While this could result in some gains in tax revenue, it would hamper the objective of affordable energy and further accelerate the energy transition to non-fossil sources, and herald a faster loss of tax revenue in the medium to long term unless the taxation regime is also

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7. Making GST achieve its true potential, October, 2021, Vijay Kelkar and Rahul Renavikar, Pune International Centre

8. According to Dr Kelkar and Rahul Renavikar's paper, *"To protect the revenue concerns of the Centre and the States, a non-vatable cess can be levied over and above the GST which can be divided amongst the Centre and the States. These levies will also play the role of "carbon tax" and promote de-carbonisation, thus help our country achieve the Paris Agreement commitments"*.

reformed. Finally, there is also the longer term goal of enhanced energy security and independence. This highlights some of the complexities involved in reforming the tax system to deal with the effects of the energy transition. Significant amount of background research work and convening among important stakeholders could help in arriving at some consensus on such taxation and pricing principles.

5. ***Expert Advisory Group on taxation in light of energy transition:*** An expert group on taxation can be set up by the Ministry of Finance, to study this issue in greater detail in the context of the ongoing energy transition (among other things) and come up with recommendations for the short as well as long term. Alternatively, the Parliamentary Committee on Finance should take up this issue, consult experts and suggest a way forward. It may also be considered whether the expert group can have a 'permanent sub-group' on energy that can periodically review the situation and make recommendations once every, say, 3 years. The expert group should ensure that the 'losers' of the energy transition are compensated adequately to ensure a just transition, and reduce the adverse impacts of the transition on already poor regions of the country. Further, such a group should also track global best practices in this regard and adapt them for India.

Annexure

Table 1. Year wise tax and non-tax revenues from various energy sources from FY 2018 to FY 2021 (Rs. Crore)

		Coal			Electricity		Petroleum			Coal, Electricity and Petroleum		
Year	Revenue Instrument	Royalties, Dividends	Taxes, Duties, Cesses	Sub-Total	Duty	Sub-Total	Royalties, Dividends	Taxes, Duties, Cesses	Sub-Total	Royalties, Dividends	Taxes, Duties, Cesses	Total
2017-18	All States and UTs	15,675	4,713	20,389	34,804	34,804	9,632	197,231	206,863	25,307	236,749	262,056
	Centre	8,961	53,393	62,353	0	0	25,303	271,422	296,725	34,264	324,814	359,078
	Total	24,636	58,106	82,742	34,804	34,804	34,935	468,653	503,588	59,571	561,563	621,134
2018-19	All States and UTs	17,430	4,486	21,916	40,345	40,345	13,565	214,026	227,591	30,995	258,857	289,852
	Centre	6,823	58,983	65,807	0	0	28,002	273,785	301,787	34,825	332,768	367,594
	Total	24,253	63,470	87,723	40,345	40,345	41,567	487,810	529,378	65,821	591,625	657,446
2019-20	All States and UTs	16,894	4,663	21,557	40,918	40,918	12,097	208,959	221,056	28,990	254,540	283,530
	Centre	6,171	56,026	62,197	0	0	23,334	281,938	305,272	29,505	337,964	367,469
	Total	23,065	60,689	83,754	40,918	40,918	35,430	490,897	526,328	58,495	592,504	650,999
2020-21	All States and UTs	15,327	5,352	20,679	48,142	48,142	7,557	210,093	217,650	22,884	263,587	286,471
	Centre	7,077	50,088	57,165	0	0	13,983	416,294	430,277	21,059	466,382	487,441
	Total	22,404	55,440	77,844	48,142	48,142	21,540	626,387	647,926	43,943	729,969	773,912

Table 2: State-wise tax and non-tax energy revenues from different energy sources for select states – FY18 to FY21 (Rs. Crore)

			Year			
State	Source	Revenue- Heads	2017-18	2018-19	2019-20	2020-21
All States & UT	Coal	Sub-total Coal (Royalty+Dividends)	15,675	17,430	16,894	15,327
		Taxes, Duties, Cesses from Coal	4,713	4,486	4,663	5,352
	Electricity	Taxes and Duties on Electricity	34,804	40,345	40,918	48,142
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	9,632	13,565	12,097	7,557
		Taxes, Duties, Cesses from Petroleum	197,231	214,026	208,959	210,093
	Total (Coal, Petroleum and Electricity)		262,056	289,852	283,530	286,471
Assam	Coal	Sub-total Coal (Royalty+Dividends)	57	58	41	8
		Taxes, Duties, Cesses from Coal	9	21	12	3
	Electricity	Taxes and Duties on Electricity	60	73	195	220
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	3,225	4,438	4,116	4,079
	Total (Coal, Petroleum and Electricity)		3,350	4,590	4,364	4,310
Chhattisgarh	Coal	Sub-total Coal (Royalty+Dividends)	3,081	3,519	3,160	3,072
		Taxes, Duties, Cesses from Coal	683	577	558	608
	Electricity	Taxes and Duties on Electricity	1,689	1,790	1,837	2,350
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	3,721	4,004	3,886	4,121
	Total (Coal, Petroleum and Electricity)		9,174	9,891	9,441	10,151
Jharkhand	Coal	Sub-total Coal (Royalty+Dividends)	3,754	4,033	3,717	3,397
		Taxes, Duties, Cesses from Coal	399	507	534	767
	Electricity	Taxes and Duties on Electricity	183	209	236	499
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	3,281	2,808	3,312	3,631
	Total (Coal, Petroleum and Electricity)		7,618	7,557	7,800	8,294
Karnataka	Coal	Sub-total Coal (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Coal	0	0	0	0
	Electricity	Taxes and Duties on Electricity	1,485	2,334	2,693	2,530
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	13,635	14,773	15,649	15,736
	Total (Coal, Petroleum and Electricity)		15,120	17,107	18,343	18,266
Madhya Pradesh	Coal	Sub-total Coal (Royalty+Dividends)	2,440	2,797	2,810	2,703
		Taxes, Duties, Cesses from Coal	842	906	953	1,182
	Electricity	Taxes and Duties on Electricity	2,590	2,616	2,268	3,150
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	9,453	9,572	10,818	11,975
	Total (Coal, Petroleum and Electricity)		15,324	15,891	16,849	19,010
Maharashtra	Coal	Sub-total Coal (Royalty+Dividends)	1,273	1,534	1,551	1,496
		Taxes, Duties, Cesses from Coal	244	149	149	149
	Electricity	Taxes and Duties on Electricity	7,345	10,085	9,619	11,200

			Year			
State	Source	Revenue- Heads	2017-18	2018-19	2019-20	2020-21
Maharashtra	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	26,053	28,463	27,917	26,363
	Total (Coal, Petroleum and Electricity)		34,915	40,231	39,237	39,208
Odisha	Coal	Sub-total Coal (Royalty+Dividends)	2,281	2,649	2,713	2,252
		Taxes, Duties, Cesses from Coal	380	231	239	246
	Electricity	Taxes and Duties on Electricity	1,970	3,258	2,820	3,200
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	6,922	5,752	5,687	6,419
	Total (Coal, Petroleum and Electricity)		11,553	11,890	11,459	12,117
Rajasthan	Coal	Sub-total Coal (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Coal	0	0	0	0
	Electricity	Taxes and Duties on Electricity	3,377	2,148	2,263	2,800
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	12,182	12,919	13,495	15,263
	Total (Coal, Petroleum and Electricity)		15,559	15,067	15,757	18,063
Tamil Nadu	Coal	Sub-total Coal (Royalty+Dividends)	477	400	489	387
		Taxes, Duties, Cesses from Coal	63	61	62	48
	Electricity	Taxes and Duties on Electricity	1,219	621	574	1,471
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	16,024	18,785	18,737	17,502
	Total (Coal, Petroleum and Electricity)		17,784	19,866	19,862	19,409
Telangana	Coal	Sub-total Coal (Royalty+Dividends)	1,670	1,941	1,796	1,361
		Taxes, Duties, Cesses from Coal	147	201	158	132
	Electricity	Taxes and Duties on Electricity	397	16	17	33
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	8,865	10,056	10,066	8,713
	Total (Coal, Petroleum and Electricity)		11,079	12,213	12,037	10,240
Uttar Pradesh	Coal	Sub-total Coal (Royalty+Dividends)	597	442	538	512
		Taxes, Duties, Cesses from Coal	221	119	107	129
	Electricity	Taxes and Duties on Electricity	2,124	2,978	3,453	4,250
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	17,782	19,784	20,731	22,559
	Total (Coal, Petroleum and Electricity)		20,724	23,323	24,828	27,449
West Bengal	Coal	Sub-total Coal (Royalty+Dividends)	45	57	78	139
		Taxes, Duties, Cesses from Coal	1,726	1,714	1,890	2,088
	Electricity	Taxes and Duties on Electricity	2,334	2,675	2,421	2,694
	Petroleum	Sub-total Petroleum (Royalty+Dividends)	0	0	0	0
		Taxes, Duties, Cesses from Petroleum	7,314	8,411	8,088	8,333
	Total (Coal, Petroleum and Electricity)		11,419	12,858	12,477	13,254

Figure 5: Relative contributions from different energy sources to Centre and states over years FY18 to FY21.

Source: Prayas (Energy Group) analysis based on various sources

Note: The size of the pie charts in the above graph are indicative of the corresponding revenue.

India's excessive dependency on oil imports (>85%) coupled with the recent rise in international oil prices above $ 100/barrel will have widespread macro-economic implications for an economy still recovering from the pandemic. While higher prices will further accelerate the energy transition away from conventional fuels in the short term, it also reduces access and use of modern forms of energy thereby reducing productivity and quality of life.

One critical dimension of energy pricing which assumes even greater importance as the energy transition gathers momentum is 'energy taxation' and its impact on public finance. This policy brief continues our exploration of this topic and builds on the earlier working paper and panel discussion. While this policy brief focuses on the energy sector given its critical role in public finance, it is clear that the country would need to prepare for a gradual transformation of the taxation regime, going beyond just the energy sector or even just indirect taxes. This can ensure a much smoother and effective energy transition while maintaining public revenues.

For this policy brief, we have expanded our dataset to cover a period of four years, from FY 2018 to FY 2021, in order to better observe and identify trends. This entire cleaned up data is being made publicly available for other researchers to easily access and contribute to this area of work, even as we continue to explore it further. The data sources, methodology and any assumptions are detailed in the dataset itself.

Prayas (Energy Group)