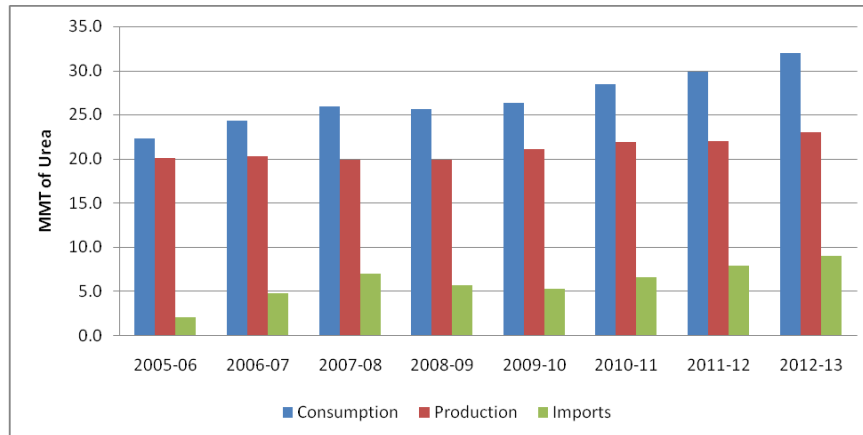


## New urea policies: will they fertilize the urea sector?

The demand for urea has been growing steadily at the CAGR of approximately 5% from 2005-06 and stood at approximately 32 million metric tonnes in 2012-13 (refers to the period April 01 to March 31). However the domestic production capacity has largely remained stagnant during the past 13 years due to feedstock constraints and policy uncertainties regarding capacity additions of urea, and stood at around 23 MMTPA in 2012-13. The incremental demand over the years has been met through imports. The domestic consumption, production and imports data from 2005-06 are summarized as below:

**Exhibit 1: Urea consumption, production and import data (2005-06 to 2012-13)**

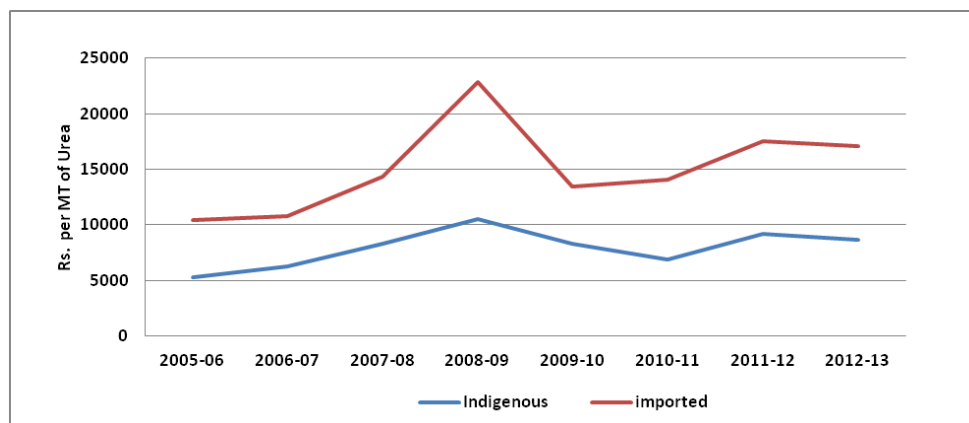


Source: Department of Fertilizer (DoF) Report

During 2012-13, around 9 MMTPA of urea was imported, of which around 2 MMTPA was imported from Oman India Fertilizer Company (OMIFCO) under long-term off-take agreement and the balance was imported on government account through state trading enterprises such as Metals and Minerals Trading Corporation of India Ltd (MMTC), Indian Potash Ltd (IPL) and State Trading Corporation Ltd (STC).

The cost of imported urea and in-turn subsidy outgo was higher in the past as compared to the cost of domestic gas-based urea units. Per tonne subsidy payment to imported and indigenously produced urea could be seen as below:

**Exhibit 2: Budgeted Subsidy payment to imported and indigenously produced urea**



Source: DoF Report

Hence, to promote self-sufficiency in the urea production and to reduce the subsidy burden, Government of India (GoI) has encouraged domestic capacity addition in urea production through New Urea Investment Policy-2012.

### New Urea Investment Policy-2012 (NUIP)

Under NUIP, the realization of urea from new capacity addition would be benchmarked to pre-fixed percentage of import parity price (IPP) based on the category of investment viz (Greenfield/Brownfield/Revamp), subject to floating floor and ceiling price, which in turn would be linked to gas prices. The details of NUIP are given in the **Annexure-I**.

The new pricing policy would provide downside risk protection as the floor price would ensure cost plus 12% post tax Return on Equity (RoE) and upside benefit through import parity linked pricing mechanism (however, the upside benefit is not likely in the current IPP of urea which is hovering around 320-340 USD/MT).

In response to the NUIP, Department of Fertilizer (DoF) has received 15 proposals till April 25, 2013 involving addition of capacity of around 1.27 MMTPA each. However, GoI is expected to go ahead with only four proposals which would bridge the present demand and domestic supply gap of 8-9 MMTPA as the capital cost for setting up the 1.27 MMTPA capacity plant comes to around Rs.4,200 crore which the GoI have to reimburse through additional subsidy payment on sale of urea.

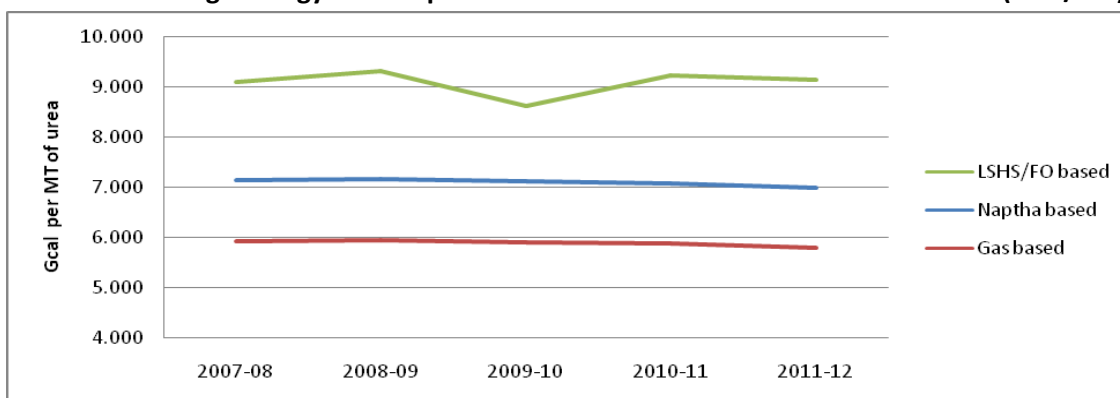
The GoI is likely to continue the import of 2 MMTPA of urea from OMIFCO as the costs is less than the present domestic cost of production. GoI is expected to go through bidding route for short listing the four proposals for which fixed cost would be the bid parameter.

### New pricing scheme – III (NPS-III)

Under NPS-III, the GoI has mandated the conversion of high-cost liquid fuel (naphtha, FO, LSHS) based urea units to natural gas-based units to reduce the subsidy burden. The total capacity for which the conversion projects are implemented adds to around 4.4 MMTPA. The NPS-III scheme was implemented to reduce the cost of production through lower cost of feedstock (natural gas) and lower energy consumption (compared to FO/LSHS and naphtha) leading to lower subsidy burden.

The actual energy consumption for different feedstock based units for the last five years is summarized as below:

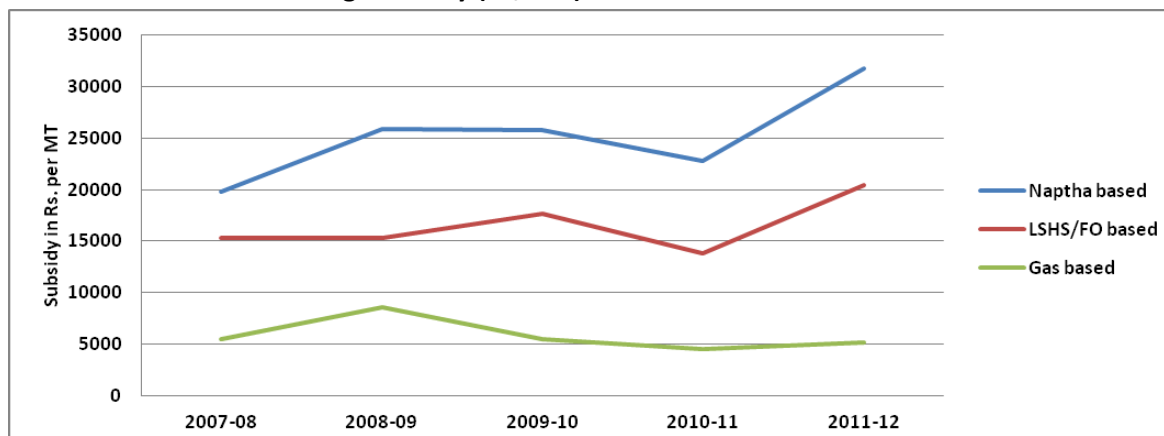
**Exhibit 3: Average energy consumptions for different feedstock-based urea units (Gcal/MT)**



Source: DoF Report

Furthermore, the subsidy paid to different feedstock-based units by Gol is also summarized as below:

**Exhibit 4: Average subsidy (Rs/ MT) for urea based on different feedstock**



Source: DoF Report

Under NUIP, Gol will reimburse the capital cost and other associated expenditure to companies for feedstock conversion project along with the regular subsidy payment. The naphtha-based units are expected to recover their investments through energy savings (for a period of five years) as their energy consumption norms used for calculation of retention price (cost of production) would not be revised for an initial five-year period. The reduction in energy consumption by 1 Gcal /MT is likely to result in the energy savings of around Rs.3,200 per MT per year. However, in case of FO & LSHS based units, the energy savings alone are not sufficient to recover the capital cost. Hence, Gol announced a provision for special fixed cost reimbursement per tonne of urea production to be recovered over initial five-year period. The above arrangement ensures full reimbursement of project cost and 12% post tax RoE.

### Incremental gas requirement

The addition in urea capacity under NUIP would take at least 3-4 years from the date of final bidding, while the feedstock conversion projects would be completed by the end of 2013-14. The feedstock (natural gas) requirement as a result is likely to increase by around 20-21 million metric standard cubic meters per day (mmscmd) going forward. However, current domestic gas output is insufficient for even the existing power and fertilizer sector plants. The present scenario of gas demand and availability for fertilizer sector could be summarized as follows:

**Exhibit 5: Gas requirements by Fertilizer sector**

Particulars	Volume (mmscmd)	Time frame
Gas required by existing fertilizer units	47.00	Present (2012-13)
Gas required for companies implementing feedstock conversion projects	9.93	2013-14 onwards
Gas required for new urea capacity addition	11.46	2016-17 onwards
Current supply of domestic natural gas to fertilizer industry	30.00	Present (2012-13)

Source: CARE Research

The gas price is also expected to be revised (to approximately USD 8.4 per mmbtu) based on the new pricing formula recommended by Rangarajan committee which would be effective from April 01, 2014 for the period of 5 years. The proposal for the same was approved by Cabinet Committee of Economic Affairs on June 27, 2013. As per the formula, the current gas price (which works out to USD 8.4 per mmbtu) would be changed every quarter based on the international prices. Thus price of domestic gas is expected to increase progressively due to open-ended nature of formula. However, with the same revision also, deep sea and ultra deep-sea discovery is not viable which

leaves only onshore and offshore shallow water discovery viable for gas exploration. Further, regulatory approvals and long lead time would most likely take at least 5 to 6 years for any material upside. Gol may also decide that any additional domestic gas available in the next 3 years will be allocated to power sector as around 39 gas fuelled power projects with an aggregate capacity of 16,374 MW are operating at a plant load factor (PLF) of 23.7% while another 13 projects with a capacity of 7,185 MW have been stranded in the absence of gas allocation.

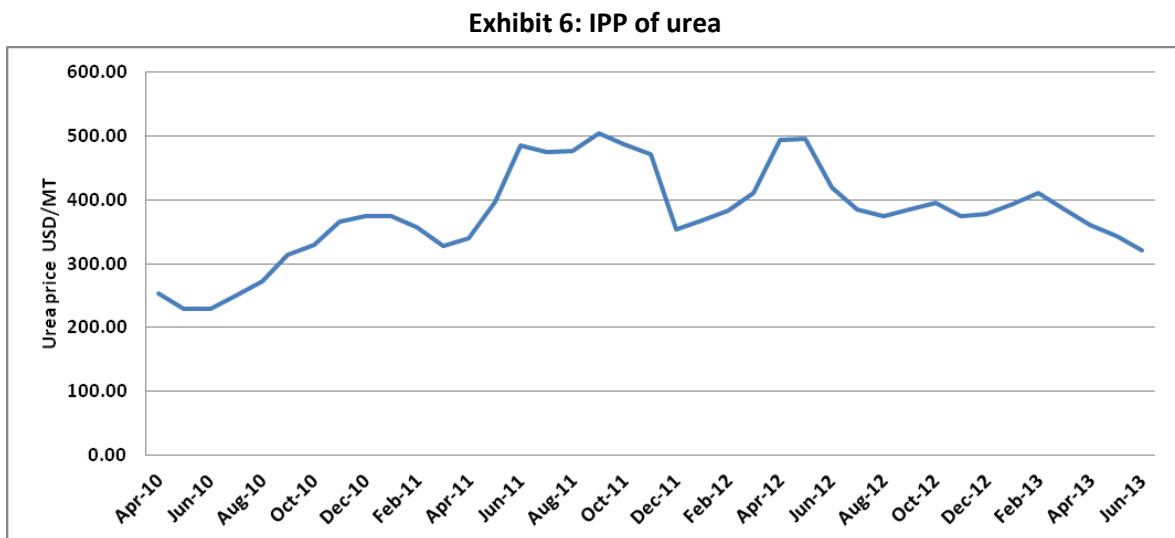
Hence, the incremental gas requirements for NUIP and NPS - III and especially for NPS-III have to be met through imported regassified liquefied natural gas (R-LNG). The cost of feedstock contributes normally more than 70% of the operating cost which is likely to increase to around 85% due to substantial increase in feedstock cost. The spot price of R-LNG at present is hovering around 19-22 USD/mmbtu which translates into cost of production of more than 550 USD/MT of urea. As the gas price is 'pass through' in nature in both the policies, the subsidy burden on the Gol would increase significantly.

**Viability of feedstock conversion projects under NPS-III to Gol**

The higher R-LNG price has already put the viability of feedstock conversion project under NPS-III in question as the Gol approved them by expecting the price differential of USD 6.5/mmbtu (gas price - USD 8/mmbtu and FO/LSHS price – USD 14.5/mmbtu) as against the present differential of USD 1-2/mmbtu (FO/LSHS price – USD 22-23/mmbtu). Hence, the projected saving in cost of production is not likely to accrue to Gol under the present rate condition.

**Trend in IPP and expectation going forward**

The IPP of urea has moderated to 320-340 USD/MT in July. Hence, the imported urea is cost-effective as compared to domestic cost of production with imported R-LNG as feedstock. The urea price trend from April 2010 is charted below:



Source: Index mundi, F.O.B Black Sea and Eastern Europe

Furthermore, around 58 new plants are planned to come on stream worldwide till 2015, which is likely to increase the global capacity by 45 million tonnes. This is likely to further moderate the IPP of urea going forward. The global demand-supply scenario of urea could be summarized as below:

**Exhibit 7: Global demand-supply scenario of urea**

(Million Metric Tonne)

	2011 (Actual)	2012 (Provisional)	2013 (Projected)	2014 (Projected)
<b>Supply</b>				
Capacity	188.3	198.5	206.9	222.1
<b>Total supply</b>	<b>162.9</b>	<b>169.9</b>	<b>179.2</b>	<b>193.4</b>
<b>Demand</b>				
Fertilizer demand	139.5	143.6	148.8	152.6
Non-fertilizer demand	18.8	19.9	20.9	21.9
<b>Total</b>	<b>158.3</b>	<b>163.5</b>	<b>169.7</b>	<b>174.5</b>
<b>Potential balance</b>	<b>4.6</b>	<b>6.4</b>	<b>9.5</b>	<b>18.9</b>

Source: Indian Fertilizer Association (IFA)

**Burden on the Gol**

The comparative burden on the Gol for the new capacity addition under NUIP with realization under different combination of IPP and gas price as compared to imports could be summarized as per below table.

**Exhibit 8: Comparative burden on Gol under NUIP against imports**

(Rs. Crore)

Urea - IPP (USD/MT)	Gas Price (USD/mmbtu)									
	8.4	12	13	14	15	16	17	18	19	20
250	2,312	4,397	4,976	5,555	6,134	6,713	7,292	7,871	8,451	9,030
275	1,550	3,635	4,214	4,793	5,372	5,951	6,530	7,109	7,689	8,268
300	788	2,873	3,452	4,031	4,610	5,189	5,768	6,347	6,927	7,506
325	26	2,111	2,690	3,269	3,848	4,427	5,006	5,585	6,165	6,744
350	-533	1,349	1,928	2,507	3,086	3,665	4,244	4,823	5,403	5,982
375	-572	587	1,166	1,745	2,324	2,903	3,482	4,061	4,641	5,220
400	-610	-175	404	983	1,562	2,141	2,720	3,299	3,879	4,458
425	-648	-648	-358	221	800	1,379	1,958	2,537	3,117	3,696
450	-686	-831	-686	-541	38	617	1,196	1,775	2,355	2,934
475	-724	-1,593	-1,013	-724	-724	-145	434	1,013	1,593	2,172

(Source: CARE analysis: capacity addition under Greenfield project category [~5 MMTPA] is considered for calculation, 1 USD=60 INR is assumed)

As shown in above table, the comparative burden on the Gol per year would increase in case of low IPP and high gas price. CARE expects that the incremental subsidy would be as present in the shaded portion due to higher tendency of IPP to decline and likely increase in R-LNG prices.

The estimated comparative burden on the Gol per year if compared to imports under NPS-III could also be summarized as per below table:

**Exhibit 9: Comparative burden on Gol under NPS-III against the imports**

(Rs. Crore)

Urea - IPP (USD/MT)	Gas Price (USD/mmbtu)									
	8.4	12	13	14	15	16	17	18	19	20
250	3,236	5,567	6,301	7,035	7,769	8,503	9,236	9,970	10,704	11,438
275	2,576	4,907	5,640	6,374	7,108	7,842	8,576	9,310	10,044	10,778
300	1,916	4,246	4,980	5,714	6,448	7,182	7,916	8,649	9,383	10,117
325	1,255	3,586	4,320	5,053	5,787	6,521	7,255	7,989	8,723	9,457
350	595	2,925	3,659	4,393	5,127	5,861	6,595	7,329	8,062	8,796
375	-66	2,265	2,999	3,733	4,466	5,200	5,934	6,668	7,402	8,136
400	-726	1,604	2,338	3,072	3,806	4,540	5,274	6,008	6,742	7,475
425	-1,387	944	1,678	2,412	3,146	3,879	4,613	5,347	6,081	6,815
450	-2,047	283	1,017	1,751	2,485	3,219	3,953	4,687	5,421	6,155
475	-2,708	-377	357	1,091	1,825	2,559	3,292	4,026	4,760	5,494

(Source: CARE Analysis: The capital subsidy reimbursement along with cost of production is extrapolated based on data from CARE rated entities, 1 USD/INR 60 is assumed)

CARE expects that the incremental subsidy burden on Gol under NPS-III would be as present in the shaded portion for the reasons already explained above.

The above argument may not be stand correct in the scenario of increase in urea IPP to more than USD 500/MT and with availability of gas at a cost-effective price, however both the scenarios are not likely to come into existence in near to medium term.

### Effect on subsidy budget

Gol would pay the subsidy from the start of commercial production for the period of eight years under NUIP policy and for a period of five years under NPS-III policy which if compared to imports of the same, is likely to bring significant strain on the subsidy burden of Gol going forward.

Furthermore, the allocated subsidy budget for fertilizers of Rs.65,974 crore for FY13 already fell short of around Rs.36,000 crore of subsidy payment to companies which remained outstanding at FY13 end, as the entire subsidy budget was exhausted by around August 2012. The outstanding subsidy amount at FY13 end would be paid from the subsidy budget of FY14, which is around Rs.65,971 crore which leaves an effective subsidy allocation of Rs.30,000 crore for FY14. Urea comprised around 55.40% of the fertilizer subsidy budget of FY14. Further, with targets of containing the fiscal deficit, the subsidy budget allocation is not likely to increase in near to medium term also. Hence with the likely increase in subsidy under NPS-III and spill over of previous year subsidy, the subsidy budget of FY14 is not likely be sufficient to make the payment to the fertilizer companies and majority of subsidy payment is likely to remain outstanding at FY14 end.

### Impact on companies participating in NUIP and NPS-III policy

As the gas cost is pass-through in nature under both NUIP policy and NPS-III policy, the higher gas cost would not impact the absolute profits of fertilizer companies, though PBILDT margin would decrease as higher gas cost will lead to higher realization. The working capital intensity of fertilizer companies is also likely to increase (mostly likely leading to higher bank borrowings) and would dent their cash balance. The increased borrowing would also affect the net profitability through increase in interest cost.

The cumulative effect of increase in R-LNG price and insufficient subsidy budget for FY13 already witnessed by the urea manufacturing companies as reflected in the industry average performance indicators tabulated below, show deterioration in key financial parameters of urea manufacturing companies.

**Exhibit 10: Comparison of performance indicators (Industry average of urea manufacturing companies)**

Particulars as on / for the year ended	March 31, 2012	March 31, 2013
Average Collection Period (days)	58	99
Working capital turnover ratio (x)	3.97	2.71
Overall Gearing (x)	1.08	1.40
Cash and bank balance (Rs. Crore)	552	351
Short term borrowings (Rs. Crore)	1221	1724

Source: CARE analysis

**Conclusion**

Gol has encouraged the investment in the urea sector through NUIP and also mandated the companies which are using liquid fuel as feedstock to change their feedstock base to gas under NPS-III. The ultimate rationale behind the implementation of these schemes was to reduce the subsidy burden.

However, the incremental requirement of gas is not likely to be met through domestically produced gas due to insufficient production and the Gol's intention to use additional gas available through exploration in near to medium term for the power sector. Hence, the additional requirements of gas has to be met through imported R-LNG, the high price of which has already put the viability of feedstock conversion project (NPS-III) under question.

The current low IPP of urea gives incentive to import urea in comparison to its domestic production with imported R-LNG as feedstock. Further, the IPP of urea is likely to remain moderate in near to medium term on account of significant projected capacity addition worldwide. Hence, the comparative subsidy burden on Gol, with domestic production as compared to imports, is likely to increase significantly in near to medium term due to pass-through nature of feedstock cost under both the schemes.

The high R-LNG price and likely implementation of all feedstock conversion projects in the current financial year is likely to increase the subsidy burden on the Gol and also pose threat to the adequacy of fertilizer subsidy budget for the current financial year. As a result, the working capital requirements of urea manufacturing companies would increase with a concomitant increase in short-term borrowings and dent in their profits and cash accruals due to higher interest costs.

### Annexure – I New Urea Investment Policy 2012

Under NUIP, the realization of urea from new capacity addition would be benchmarked to pre-fixed percentage of import parity price (IPP) based on the category of investment (Greenfield/Brownfield/Revamp), subject to floating floor and ceiling price, which in turn would be linked to gas prices. If the IPP is between the floor and ceiling price, IPP would be used for amount payable to urea manufacturer, else the floor or ceiling price would be used according to the scenario. Floor-cap band would increase in line with increase in gas price from base gas price till gas price reaches USD 14/ mmbtu. For gas price exceeding USD 14/ mmbtu, only the floor increases.

The base price for gas, floor & ceiling price of urea and increase in floor for increase in gas price beyond USD 14/ mmbtu for different categories of investment is as under.

Particulars	Greenfield/Revival of closed units	Brownfield/ expansion projects	Revamp projects
Base gas price (USD/mmbtu)	6.50	6.50	7.50
Recognition at a % of IPP (%)	95	90	85
Floor price of urea (USD/MT)	305	285	245
Ceiling price of urea (USD/MT)	335	310	255
Revision in floor and ceiling price of urea (USD/MT) for every revision of 0.1 USD/mmbtu in gas price upto the gas price of 14 USD/mmbtu	2.00	2.00	2.20
Revision in floor price of urea (USD/MT) for every revision of 0.1 USD/mmbtu in gas price beyond 14 USD/mmbtu	2.00	2.00	2.20

The policy aims to cover projects for which the production is expected to start within five years from the date of notification and would remain in force until eight years from the start of the production.

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