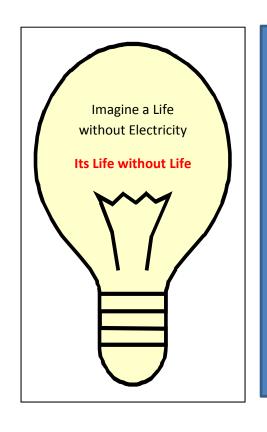


A look through Circular Debt

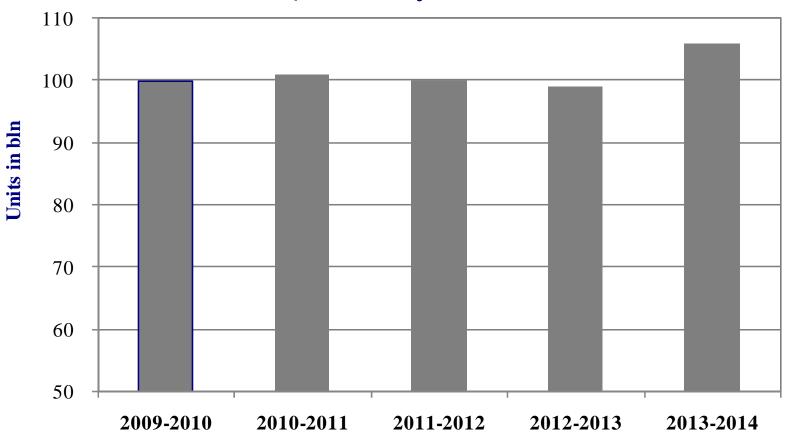
Electricity | Power to the world in the world of Power



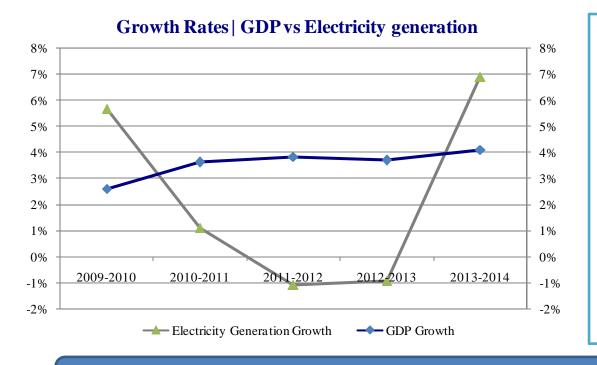
Technologies without electricity would crash

Pakistan | Significance of electricity

Pakistan | Electricity Units Produced



Pakistan | Significance of electricity



Relationship with GDP

2% growth in ELECTRICITY has the potential to push GDP by 1%

Ability to pay Ability to Install PKR 1.4trn | 5% of GDP Cost /MW | US\$3mln WILLINGNESS? FUNDING?







Circular debt brought down by Rs52b in a few months

Governments NEPRA green light to Pass circular debt

burden or





Circular debt falls to Rs196.42 billion by March 15

Circular debt

Power sector arrears 2pc of GDP till Jan '15: IMF

Govt unable to reconcile

Rs 480b circular debt cleared circular debt

blod, his lattle puriposed for gentless pro-mins by L. Egypton's day in spaces. The PP's size accepted for

erold, for \$4.000. The expense unit

Not decided with that had being an navely affecting energy production

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Seeing the meeting that held in

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> ted to the INE under Name By- persons to make advantageds, in Agramum in 2006 that it would

Federal Adjacent will use to care of fallow, to adhere to the

Mounting circular debt to worsen power crisis

Circular debt swells to Rs300bn

High-level meeting with IPPs to be held on 29th

date had already treated proper or which these EPA had EPA date under this head

Senate body informs that he wisef is lead deploy in accoming season as people would be facing exitiges of at least 8 hours. distributions and a second and an interesting and interesting to the second state of the second seco

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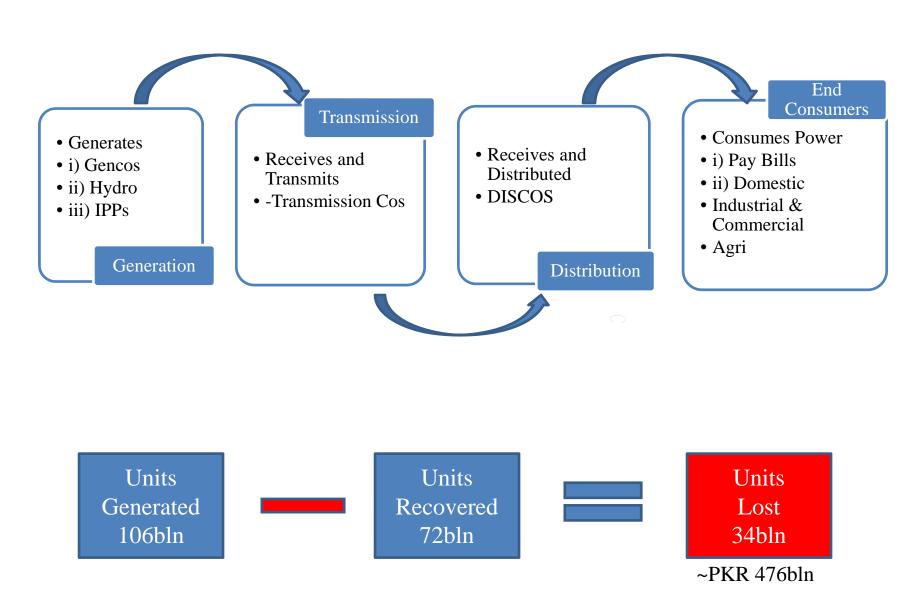
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How it Works | The Power Chain



Risk Bubble | Consumption

People Consumers		
Domestic	47%	
Commercial & Industrial	36%	
Agri & Others	17%	

Traif	f
Cost to GoP	14/Unit
Aver tariff charged	12/Unit
Subsidy	2/Unit

Recovery Rate	
Units Billed	921-1
Bills received	82bln 72bln
Recovery Ratio	88%
Recovery Ratio	0070

Consumption loss Units Billed: 82bln Bills Received: 72bln Gap: 10bln Units

Government Subsidized Price Conduct as Society

Theft

Non payment



Risk Bubble | Transmission & Distribution

T&D losses		
Received	106bln	
Transmitted	103bln	
Distributed	82bln	

DISCOS Load Managers		
Peak Demand	23,505MW	
Supply Capability	18,121MW	

Dist Losses		
2010	21%	
2011	21%	
2012	23%	
2013	20%	
2014	20%	

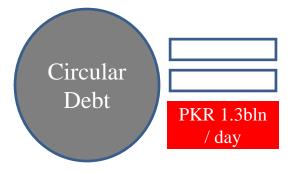
Transmission loss
3bln Units
Distribution loss
21bln Units

Governance

Management Efficiency

Transmission & Distribution Infrastructure

- Depreciated
- -Slow replenishment





PKR 140bln



PKR 42bln



PKR 294bln

Risk Bubble | Where to find it?

Fuel Supplier

- Generates
- i) Gencos
- ii) Hydro
- iii) IPPs

Generation

Transmission

- Receives and Transmits
- -Transmission Cos

• Receives and Distributed

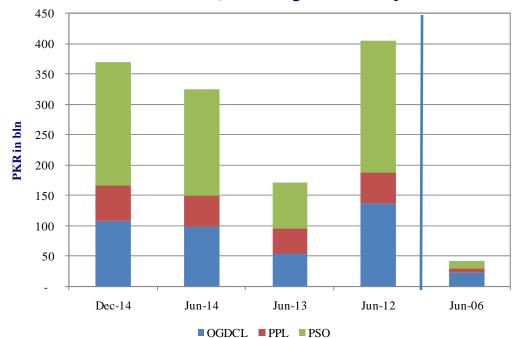
• DISCOS

Distribution

End Consumers

- Consumes Power
- i) Pay Bills
- ii) Domestic
- Industrial & Commercial
- Agri

Circular Debt | Buildup over the years



Receivables PKR bln					
	Dec-14	Jun-14	Jun-13	Jun-12	Jun-06
PSO	203	175	76	218	12
OGDCL	109	101	56	138	24
PPL	58	50	40	50	7
Total	370	326	172	406	43

Circular Debt | Way Forward



Consumption

Transmission

Distribution

Generation

Fuel Mix Generation		
Thermal	64%	
Hydel	31%	
Others	5%	

Fuel Efficiency Benchmark		
Furnace Oil	45%	
Gas	51%	

Cost /Unit of Generation		
Gas	6	
Furnace	18	
HSD	24	
Overall	14	

Dependency on RFO
[Generation bill: PKR1trn]
Oil price prices has its
share in the balloon

GENCOs Inefficient
Generation

[Efficiency: 25%]

Merit Order

GoP decision – when to run; when not to run



Capacity Revitalization
Capital Cost per MW: US\$1.5mln

Think Long term:

Requires Capital Investment on low fuel cost, low operational cost projects

[Power PSDP FY15: PKR64bln only]

Transmission & Distribution

Transmission		
Length	14,287km	
Total Circuits	154	
Overloaded	25	
Under loaded	95	

Distribution	
Efficiency benchmark	14%
Actual	20%



Infrastructure Revitalization
Capital Cost per MW: US\$ 1.5mln

Think Long term
Governance plus Management efficiency

Consumer

Lets play our part

Don't Steal

Pay the bills



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