



ENERGY™  
DEVELOPMENT COUNCIL

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# ENERGY COMMUNIQUE

## EDITORIAL

### RURAL ELECTRIFICATION WITHIN COMMUNITY ELECTRIFICATION

**A**mong nearly 3 Crore population, still more than 75 lakh people are forced to live under the light of lantern. Each year government announces to increase electricity generation and to make electricity accessible to all under its program and policy. But, those announcements are not more than a platitude and stored in yearly piles in the Singhdurbar. Though, Nepal Electricity Authority is given the full responsibility to make rural electrification effective, no significant results are yet achieved. Whether it be generation, or transmission, or distribution, progress in all have been viscous and therefore electricity service is unreliable. The fundamental rights of citizens are to be made secured by the government but the most prior one: access to electricity is kept on being neglected.

Regardless the progress scenario, the Government of Nepal has always appropriated budget for rural electrification. It is an irony that the budget is used in other heading towards the end. Trend of using the budget allocated for rural electrification in city area, dividing the budget in useless way, no monitoring, improper management of construction work plan, irregularity in procurement and not following even standard in construction activities are the major hindrances for rural electrification program from taking a remarkable leap. Series of exacting steps in procurement process: procurement of primary materials from central level, secondary from regional level and rest from district level has made electrification duration lengthy. The electrification process needs to be made simple and quick by cutting down lengthy hierarchical



**Mr. Narayan Gyawali**  
Chairman  
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An EDC Member Organization

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Responsibilities.

While comparing the rural electrification projects carried by NEA and those by community, the fact that community based electrification projects are quicker and efficient cannot be denied. Despite the budget appropriated for electrification programs other than community electrification are always prodigal, community electrification projects have been successful to reach a way higher number of consumers than all others. Coverage to more than 5 lakh households in around 14 years period and additional 2 lakh households quickly after completion of ongoing projects are the major progress under community electrification. In the face of the effects of prolonged construction, loose management of construction materials, exceeding construction deadlines, mild or no any treatment to careless contractor and frequent collapse and rearrangement of NEA departments, the above mentioned progress can be considered as a huge achievement. This outcome indicates the speed and efficacy of electrification project steered under community's participation. The

community based electrification has been proved to be the great support to government as it has reduced government's encumbrance in distribution management, regulation, maintenance, electricity pilferage control and many more multiplied benefits like creation of local employment and entrepreneurship also could not be discarded. This program is steered ahead under the provision where the total estimated amount of the project is covered through government and community's contribution in the ratio of 9:1.

**How is community electrification project implemented?**

The community willing to go for this project has to go through several steps which are listed below:

1. Initially, the particular community has to register electricity co-operative as per co-operative act 2048.
2. The total cost of the project has to be estimated in coordination with local office of NEA and a proposal with commitment to contribute 10% of the total estimated amount has to be submitted along with necessary documents as de-

manded by the community rural electrification by-law.

3. The respective distribution center has to study and send the recommendation to approve the community's proposal to the Community Rural Electrification Department, CRED.
4. After studying the proposal CRED has to send the proposal to director's committee for its consent.
5. After the decision of director's committee, CRED sends 45 days ultimatum to sign an agreement with requesting co-operative after 10% estimated amount is deposited.
6. Community co-operative has to deposit the amount equivalent to 10% and sign the agreement within the allocated time.
7. CRED has to publish a notice of 'Call for bids' within 60 days from agreement date.
8. Selection of contractor, agreement with contractor, construction and hand over of the infrastructure to community for operation and management are the successive steps.
9. The community now becomes

Responsible to manage the regular operation and service as a bulk consumer of NEA.

10. The electricity purchase amount from NEA and sales amount to consumer are to be maintained as per the tariff rate designed by Electricity Tariff Fixation Committee.

Community Electrification By-law made according to Nepal Government's policy by NEA is the main tool for guiding community electrification program. NEA and Community Rural Electricity Entities, CREEs conduct their roles and responsibilities being abided with this by-law. Since thousands of consumers are covered by single CREEs, these institutions are to be given priority as bulk consumers. Talking about individual responsibilities, NEA is responsible to fix the issues up to High Tension line and transformer, beyond which the area falls under the responsibility of CREE. CREE regularly maintains a fund called 'maintenance fund' by separating 10% of total sales every month. Since the CREEs are providing reliable electricity service by promptly fixing local problems, consumers are more satisfied and

have feeling of ownership towards the CREE. Electricity service and payment service both are locally available, this has created economic benefit to some extent.

In absence of local representatives for long period, the CREEs, have fulfilled the vacant space in many ways. Regular meetings, general assembly, transparency and accountability, good governance practices etc. has developed the CREEs as reliable pillar of community's development. CREE is the permanent institution that has remained in the community from the time when position of local representatives were void. So, these entities have filled the gaps and have been practicing local democracy in some way. As a result, executive members of CREEs are elected in local government in hundreds of numbers throughout the country. So, every CREE now has direct link to local government. Therefore, there is no other appropriate alternate to community electrification for lighting up rural parts of our country. National Association of Community Electricity Users' Nepal, NACEUN as an umbrella organization of 280 CREEs spread

in 52 districts of Nepal, has always stood for supporting and shielding community electrification program foreseeing its importance in quick and effective development of rural community.■

## EDC ACTIVITIES



### Roundtable meeting at EDC with the Chairman of Energy and Finance, Office of Governor New York State

**O**n October 31<sup>st</sup> 2017, Mr. Richard Kauffman, Chairman of Energy and Finance Policy Expert from the New York State, Mr. Dhurba Shah, Cultural Affairs Specialist, Ms. Grace Carroll, Cultural Affairs Officer from the U.S. Embassy visited EDC for a roundtable meeting. The meeting held was to discuss and share some of the global best practices for effective policy lobbying for the development of and attract investment in Nepal's energy sector. Mr. Sujit Acharya, Chairperson of EDC, Ms. Itnuma Subba, Executive Manager of EDC, Mr. Uttar Kumar Shrestha, CEO of Butwal Power Company, Mr. Anil Rajbhandary, Director of NEA and Mr. Bhanu Pokharel, President of NHA who are the board and executive members of the council were present during the meeting.

## EDC ACTIVITIES

### EDC Visits the Ambassador of the Embassy of Brazil



On October 11<sup>th</sup> 2017, the delegation led by Ms. Itnuma Subba, Executive Manager of EDC, visited Her Excellency of Brazil, Ms. Maria Teresa Mesquita Pessôa. The purpose of the meeting was to inform H.E. about NPIS 2018. Ms. Subba also extended an invitation to the Ambassador for delivering a Special Address as well as chair one of the sessions in the Summit. The Ambassador was positive and has shown a keen interest for participation in NPIS 2018.

### EDC attends ANDRITZ HYDRO's Customer Day Nepal, 2017

On November 1<sup>st</sup> 2017, EDC delegation led by Ms. Itnuma Subba and Mr. Nitesh Panta from EDC Secretariat attended the ANDRITZ HYDRO's Customer Day Nepal 2017. The event organized by ANDRITZ HYDRO was to highlight the state of the art technology solutions of ANDRITZ HYDRO for hydropower plants and will offer ample opportunities for an interesting exchange of information about market and the global trends with the presence of participants and experts of this field. Ms. Subba also extended an invitation to Mr. Josef M. Ullmer, MD and CEO of Andritz Hydro to participate in the upcoming NPIS 2018.

### FNCCI invited EDC for Nepal-Austria Economic Forum

On October 31<sup>st</sup>, Ms. Itnuma Subba, the Executive Manager of EDC and Mr. Rajesh Aggarwal from NHE attended the Nepal-Austria economic forum. The Business to Business meeting was co-organized by FNCCI, Austrian Federal Economic Chamber and Austrian Embassy in New Delhi at Hotel Radisson, Kathmandu. The program focused on the business opportunities in Nepal. Ms. Subba had an opportunity to meet H.E. Ms. Brigitte Oppinger-Walchshofer, Austrian Ambassador to Nepal and Mr. Oskar Andesgner, the Commerce Counsellor to Nepal at the Austrian Embassy. Ms. Subba extended an invitation to the Ambassador to participate in NPIS 2018. The Austrian Ambassador to Nepal was positive and has shown a keen interest for participation.

## EDC ACTIVITIES

### The tender notice for the month of October

**H**ARATI is an IT company, working in several technologies based products, services and provides online service portal ([tendernotice.com.np](http://tendernotice.com.np)). Following is a list of tender notice provided by HARATI;

# Tender Notice.com.np

### Tender, Bids and Notices related to Hydro and Energy segments in Nepal Month: October 2017

S.No.	Notice Publisher	Description	Published Date	Notice Category	Product Service
1	SJVN Arun-3 Power Development Company (P) Ltd., Khandbari, Nepal	Amendment Notice <a href="#">Linked Notice</a>	10/24/2017	Amendment Notice	Other Product/ Services
2	Chilime Hydropower Company Limited, Kathmandu	Amendment to the Tender Notice Published on 2074/07/06 <a href="#">Linked Notice</a>	10/24/2017	Amendment Notice	Other Product/ Services
3	Nalgad Hydropower Company Limited	Construction of Prefabricated Office Building	10/23/2017	Tender	Construction/ Building
4	Chilime Hydropower Company Limited, Kathmandu	Supply and Delivery of Double Cab Pickup Trucks	10/23/2017	Tender	Automotive / Vehicles
5	SJVN Arun-3 Power Development Company (P) Ltd., Khandbari, Nepal	Observing Discharge and Silt Data	10/19/2017	Tender	Other Product/ Services
6	SJVN Limited	Design, Engineering, Manufacturing, Delivery at Site including Insurance, Unloading, Site Storage and Preservation, Erection/Installation, Testing, Supervision and Commissioning etc.	10/19/2017	Tender	Other Product/ Services
7	Upper Tamakoshi Hydropower Limited, Upper Tamakoshi Hydroelectric Project, Gyaneshwor, Kathmandu	Supply and Delivery of Transformers, Distribution Line Materials, ACSR Conductor and ABC Cable	10/16/2017	Tender	Electronics/ Electric Utilities
8	SJVN Arun-3 Power Development Company (P) Ltd., Khandbari, Nepal	Construction of Transmission Line	10/14/2017	Tender	Electronics/ Electric Utilities
9	Nepal Medical College Pvt. Ltd., Jorpati, Kathmandu	Supply of Medical Equipment	10/4/2017	Tender	Health/ Medical

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TenderNotice.com.np

## MEDIA COVERAGE

### Energy mix for better output

**W**e are all happy faces these days and we don't have to look at the load-shedding schedule anymore. Thanks to the effort of the NEA's entire team for making this happen. But, can we be assured that we won't face the load-shedding in the future? We don't have an answer. So, what can NEA and we do together to ensure a load-shedding free Nepal forever and after?

Demand Side Management is one of the option which has been implemented by the NEA to eradicate load-shedding. DSM is the process of modifying energy consumption using cost-effective conservation, efficiency, and load management programs to reduce the demand for, and cost of, energy services. In contrast to "supply-side" strategies, which increase generation capacity by building new power plants whereas the purpose of DSM is to reduce energy use and to smooth out the

daily peaks and valleys in electric energy demand to make the most efficient use of energy resources and to defer the need to develop new power plants.

To ensure stability on the local electricity grid, supply and demand must remain balance in real time. DSM typically works by inducing utility consumers to change their energy consumption habits and use energy-efficient appliances and equipment's in the end use application. DSM is a resource option that complements power supply as well as cost savings to the customers. Meanwhile, reductions of environmental pollutions are also indirectly achieved through DSM.

As a DSM initiative, NEA at its end plans to reduce electricity losses to 10 percent by 2020 from existing 25 percent. It already has plans to implement different programs like automating the Distribution and Consumer Services (DCS), introducing smart meters and GIS-

based monitoring of the energy supply and management. With this technical loss and non-technical losses can be reduced. Similarly, it also plans to add new substations, transformers where ever required to curb the issue.

Lately, Mr. Kulman Ghising (NEA) had to defend themselves on the government's decision to buy LED bulbs from India's Energy Efficiency Service Limited (EESL), which ran into controversy after news came out on the government paying a lot on the purchase of the LED lights. This initiation is a part of DSM, NEA is planning to procure the LED bulbs and sell them to its 3.5 million customers in a bid to replace CFL and incandescent bulbs that are widely being used by households. Such replacement, as claimed by the NEA, will save around 200 MW of energy during the peak energy consumption hours. The procurement process has stopped, now 200 MW shortage might hit

us hard during the peak season. Who are to be blamed, is it the NEA team OR procurement act OR the suppliers who are working for their vested interest? But, ultimately the entire nation must suffer.

As a citizen of a country everyone should think on how an individual can contribute on being Energy Efficient and save energy. We can easily narrow the gap between demand & supply and decrease the energy intensity in each sector by simple approach towards energy conservation and efficiency through energy efficient technology and housekeeping habits.

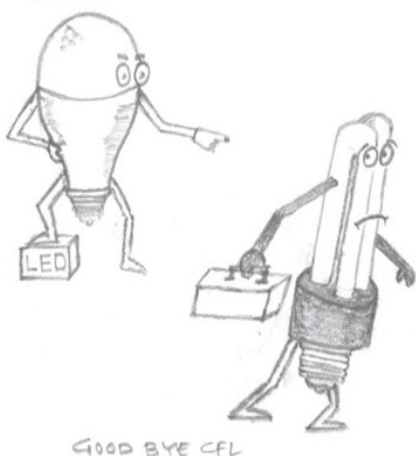
### Energy Saving Tips Lighting:

A lumen is the measurement of

light output from a lamp, often called a tube or a bulb. All lamps are rated in lumens. For example, a 100-W incandescent lamp produces about 1750 lumens.

Another lighting term is efficacy, which is the ratio of light output from a lamp to the electric power it consumes and is measured in LPW (lumens per watt).

- Use of electronic ballast in place of conventional choke saves energy up to 20%.
- Use of LED lamps in place of GLS lamp can save energy up to 70%
- Clean the lamps and fixtures regularly. Illumination levels fall by 20-30% due to collection of dust.
- Use of 16W LED Tube light instead of 40 W tube light saves electricity by 8 to 10%.■



*The author is Mr. Roshan Silwal, the Chief Executive Officer at Comtronics Private Limited, an EDC Member Organization.*



## NEPAL'S SCENARIO

### NEA setting up charging stations for electric vehicles



**K**ATHMANDU, Oct 16: Nepal Electricity Authority (NEA), the public power utility, is to import electric vehicles for promotional purpose and to set up charging stations for such vehicles.

NEA is forwarding the process for this purpose since the country has to go for using electric vehicles with the Upper Tamakoshi Hydroelectricity Project starting to generate power from coming mid-June.

The NEA is setting up a charging station at its central office at Ratna Park for promoting electric vehicles. NEA executive director Kulman Ghis-

ing said the process of constructing the charging station has been started.

The NEA stated that it is taking this initiative to make the people used to the use of electric vehicles in view of the electricity produced by the Upper Tamakoshi Project going to be wasted in the night time once the project starts power generation.

In this connection, the NEA is holding discussion along the line of using small electric vehicles in Kathmandu.

The construction of the Upper Tamakoshi Hydroelectricity Project has been completed 91 percent and

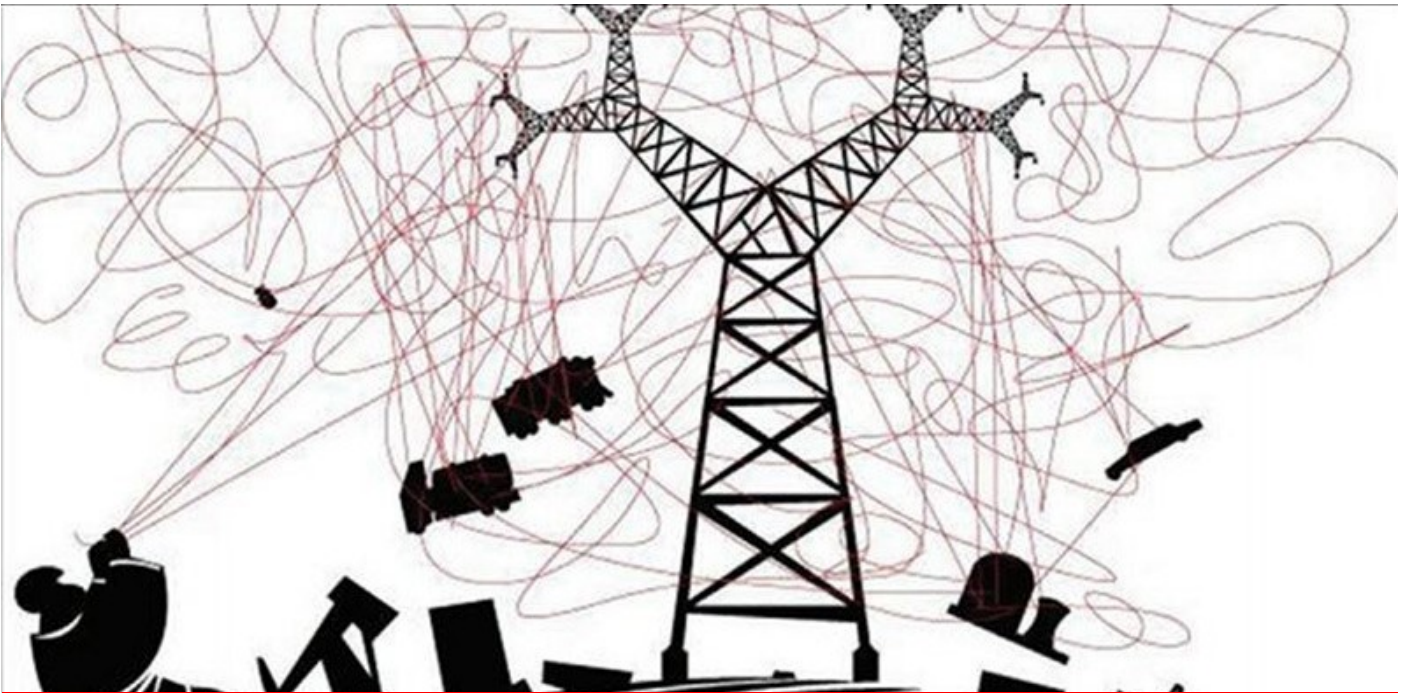
preparations are afoot to operate the project's first unit by this mid-June.

NEA, which ended the power cuts (load-shedding) since last year, has been emphasizing that initiatives for using and the purchase of electric vehicles as a way to reducing large petroleum import should be taken at the state and the citizens' level.

Charging stations would be set up at various places in Kathmandu in the first phase, and in Pokhara, Chitwan, Biratnagar, Nepalgunj among other places after that. RSS.■

Source: <http://www.myrepublica.com/news/29166/>

## Cross-border Energy Trade



**It could lead to effective resource utilisation, enhance supply reliability and reduce capital and operating costs.**

**A**pr 26, 2017-With an installed regional capacity of 360,603MW, South Asia is gradually emerging as a fulcrum of electricity exchange and power trading. Bilateral exchanges are occurring, as evident in the noteworthy Bhutan-India power flow of 1,410MW. The first and historic inter-connection between the Bangladeshi and Indian national grids in 2013 enabling a 600MW exchange is of particular note; it has triggered immense possibilities and opened the scope for multilateral power flows. Nepal could potentially be the biggest beneficiary in this game; if harnessed steadily, its power could

be sold across South and South East Asia, with wheeling facilities provided by Indian national grids. Cross-border energy trade could lead to effective utilisation of natural resources, increase in supply reliability and savings in capital and operating costs. Besides the optimal use of generating capacity and mutual support during contingencies, it addresses seasonality issues both in terms of generation and daily usability. It could also bring about large scale transformation in various sectors. It could be the single most effective confidence-building measure through the participation of multiple stakeholders and consolidate regional

cooperation and integration process.

### **Reinforcing factors**

There are several reinforcing factors that are bound to promote energy exchanges among SAARC member countries in the near future. Huge power crises are leading to long hours of load shedding in many South Asian countries. In June 2015, a Pakistani newspaper stated that “a suffocating heat wave across Pakistan has killed over 700 in the past week, exposing a severe power crisis and threatening to usher in a new period of political unrest.” The energy import and deficit costs have been rather disturbing. There has been tremendous public pressure on

respective governments to improve the situation.

Saarc leaders seem to be fast realising the criticality of energy cooperation. Islamabad Saarc Summit Declaration (2004) floated the concept of an 'energy ring'. In the Kathmandu Summit (2014), leaders signed the Saarc Framework Agreement for Energy Cooperation. It provides non-discriminatory transmission access for cross-border electricity trading. Following this, Nepal and India signed an agreement on Electric Power Trade, Cross-border Transmission Interconnection and Grid Connectivity in 2014. They also set up a Joint Working Group for the planning and identification of cross-border interconnection.

There have been protracted sensitisation and preparations at the regional level. The technical and professional organisations responsible for generation, transmission and distribution have met several times to work on both short- and long-term possibilities. The Petro-bangla, Bangladesh Power Development Board, Power Grid and Power Trading Corporations of India, and the electricity and regula-

tory authorities of Nepal, Sri Lanka and Pakistan have become the key stakeholders. International agencies like the World Bank, ESCAP, Asian Development Bank, USAID (SARI-E initiatives) and UNDP have also been fairly active. Several training programmes and capacity-building projects have been conducted at various levels. Many forward-looking and comprehensive studies are in place.

### **Sector reforms**

Though Nepal, Bhutan and Bangladesh are lagging behind, massive power sector reforms have taken place in other parts of the region. The Electricity Act 2003 was designed in India with the aim of developing the power market through increased competition, more players and protection of consumer interests. It recognises trading as a distinct activity and has made adequate and progressive provisions governing open access both in terms of transmission (inter-state and intra-state) and distribution networks. Another policy, the Integrated Energy Policy 2006, recognises that energy security can be increased by diversifying sources of import and energy. It notes that

the import of hydro power through Bhutan and Nepal could enhance energy security. The first national level power exchange, the Indian Energy Exchange (IEX) commenced operation in June 2008. It has already attracted more than 200 participants, with 25 states, four union territories, many power plants and direct consumers. This has facilitated trading of more than 6.7 billion units worth Rs45 billion.

(To view the full article, please visit the link below.)■

## Nepal set to get 462.5MW of 'firm energy'

**S**ep 8, 2017-Nepal will get 462.5 MW of 'firm energy' from Pancheshwar Multipurpose Project, a mega hydroelectric-cum-irrigation project which is being built jointly by Nepal and India. This means Nepal will get minimum of 462.5 MW of electricity round the clock round the year. Firm energy is uninterrupted power that is supplied continuous-

ly all year round.

During the two-day meeting of the Joint Expert Group—comprising of officials from both countries—that concluded on Thursday, it was decided that the project's firm energy output would be 925 MW and Nepal would receive half.

"The meeting made the decision based on 50 years of hydrological data from 1962 to 2012," said Dinesh Kumar Ghimire, joint secre-

tary of the Energy Ministry who was also present at the. Earlier, India was proposing the firm energy of 767 MW of energy.

However, the meeting failed to finalise the detailed project report (DPR) of the mega-project as Nepali officials participating in the meeting declined to provide water from the Mahakali River to Sarada River as demanded by the Indian side.■

Source: <http://kathmandupost.ekantipur.com/news/2017-09-08/nepal-set-to-get-4625mw-of-firm-energy.html>

## Public can sell solar power to the government now onwards

**N**ow onwards, members of the public can also sell solar power produced at their homes to the government as the Nepal Electricity Authority has launched a plan to purchase solar power produced from the private sector and general public.

In the first phase, the Authority has already connected solar panels of Nepal Engineers' Association in Pulchok and Commission for the Investigation of Abuse of Authority in Tangal to the central transmission line.

Individual households should have a panel with more than 500 watt capacity to sell power to the Authority. The Alternative Energy Promotion Centre says buying electricity from the panels with the capacity less than 500 watt will be quite costly.

The Authority hopes that its new project will provide a significant support to elimination of energy crisis and proper utilisation of solar energy.

A study carried out by the Authority has shown that two megawatt power can be added to the national

transmission from solar panels immediately. ■

Source: <http://www.nepalenergyforum.com/public-can-sell-solar-power-to-the-government-now-onwards/>

## GLOBAL PERSPECTIVE

### Death of gas and diesel begins as GM announces plans for 'all-electric future'



**A**fter nearly a century of building vehicles powered by fossil fuels, General Motors — one of the world's largest automakers — announced Monday that the end of GM producing internal combustion engines is fast approaching.

The acceleration to an all-electric future will begin almost immediately, with GM releasing two new electric models next year and an additional 18 by 2023.

At a media event at GM's technical campus in Warren, Mich., on Monday, Mark Reuss, the company's chief of global product development, said the transition will take time, but

the course has been set.

"General Motors believes in an all-electric future," Reuss said. "Although that future won't happen overnight, GM is committed to driving increased usage and acceptance of electric vehicles."

Reuss avoided naming the year when the auto giant will cease producing gas and diesel vehicles, noting that the company is too large to make such an estimate, according to USA Today.

GM finished 2016 as the world's third-largest auto-seller, breaking previous company records with 10 million vehicles sold, the company said in a news release.

The automaker said that arriving at a "zero emissions future" will require a two-pronged approach: battery electric and hydrogen fuel cell electric vehicles.

At Monday's event, Fast Company reported, officials unveiled three concepts for reporters: "a sporty crossover, a larger wagon or SUV and a tall, boxy pod car that looked like a people-mover for cities."

GM also introduced a fuel-cell-powered heavy-duty truck with two electric motors known as Surus, or "silent utility rover universal superstructure."

GM's foray into the electric marketplace has already resulted in resounding success, with the Chevrolet Bolt being named Motor Trend's 2017 Car of the Year and the 2017 North American Car of the Year. The Bolt boasts a 240-mile battery range on a single charge and costs \$37,500 before tax incentives. That range places the vehicle well above the Nissan Leaf (up to 107 miles on a single charge) and

slightly above Tesla's Model 3 (up to 220 miles on a single charge for a standard battery).

As GM commits to electric innovation, the company will compete in an increasingly crowded marketplace. In recent months, Tesla unveiled the company's first mass market electric vehicle, joining companies such as Ford, Volvo, Nissan, Aston Martin and Jaguar Land Rover, all of whom are vying for market space.

On Monday, Ford announced plans to create a group known as "Team Edison" that is to be tasked with developing fully elec-



tric cars. Sherif Marakby, Ford's head of electrification and autonomous vehicles, told Automotive News that the company is on pace to produce 13 electrified vehicles over the next five years.

"We see an inflection point in the major markets toward battery electric vehicles," Marakby said.

"We feel it's important to have a cross-functional team all the way from defining the strategy plans and implementation to advanced marketing." ■

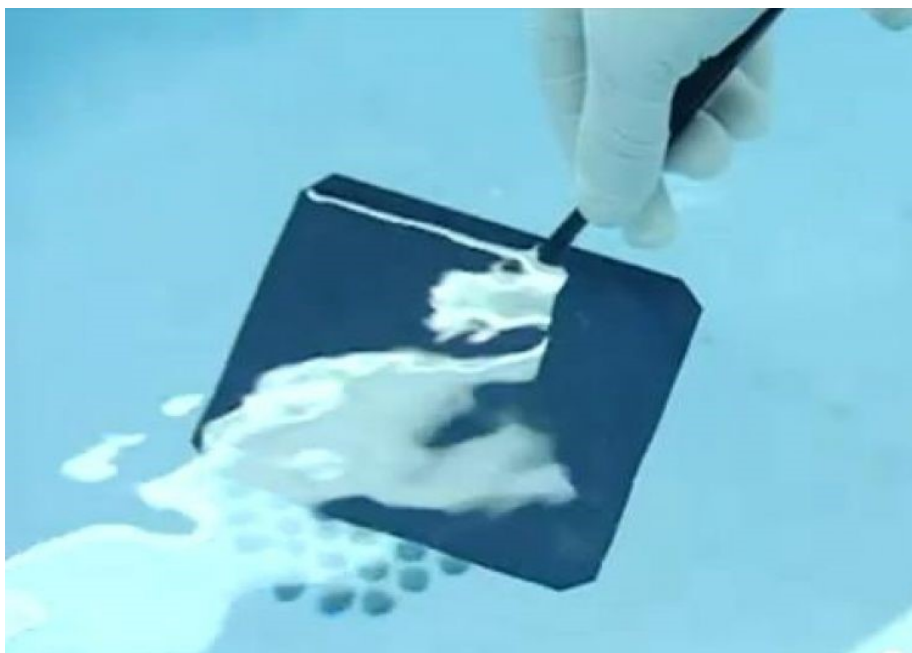
Source: <https://www.washingtonpost-com.cdn.ampproject.org/c/s/www.washingtonpost.com/amphtml/news/innovations/wp/2017/10/02/death-of-diesel-begins-as-gm-announces-plans-for-all-electric-future/>

## JinkoSolar beats multicrystalline cell efficiency record

Leading 'Silicon Module Super League' (SMSL) member JinkoSolar has reported a record solar cell efficiency of 22.04% for a P-type multicrystalline PERC (Passivated Emitter Rear Cell), using its practical sized (245.83cm<sup>2</sup>) wafer.

The company said that the record conversion efficiency was achieved on a high quality boron doped mc-Si substrate. Advanced texturing, passivation and anti-LID technologies were integrated into the PERC cell.

The new world record was said to have been independently confirmed by Fraunhofer ISE, breaking JinkoSolar's previous record of 21.63% set in 2016.



"This is the first time that conversion efficiency for P-type mc-Si PERC cells exceeded the 22% efficiency mark which I believe will serve as a guideline developing higher efficiency products," commented by Dr. Jin Hao, Vice President of JinkoSolar. "The entire manufacturing chain is com-

prised of low-cost industrial processes and will be gradually transferred into mass production. Leveraging our high-efficiency solar cells, we will continue to develop advanced manufacturing techniques to reduce the cost of PV products."■

Source: <https://www.pv-tech.org/news/jinkosolar-beats-multicrystalline-cell-efficiency-record>

## China may soon set date for ban on new petrol, diesel cars: expert

China may join Britain and France in banning new petrol and diesel cars from 2040 and could set an earlier deadline, the secretary-general of the World Energy Council (WEC) said.

The Asian nation, which has been blighted by pollution, is the world's largest car market.

A government announcement on a decision to ban new cars powered by fossil fuels by 2040 or earlier was "very likely within the next few months," said WEC Secretary-General Christoph Frei at an energy conference in Austria.

"This would be a revolution for the auto industry," he said.

A senior Chinese official said this

month the country had begun studying when to ban the production and sale of cars using traditional fuels. He did not give a timeline for an announcement.

China is targeting 35 million vehicle sales by 2025 and wants new energy vehicles (NEVs) to make up at least one-fifth of that total, the Industry Ministry said in April.■

Source: <https://www.pv-tech.org/news/jinkosolar-beats-multicrystalline-cell-efficiency-record>

## Michael Bloomberg Pledges \$64 Million for Anti-Coal, Pro-Renewables Initiatives



Former New York City Mayor Micheal Bloomberg has committed \$64 million to backing environmental groups trying to shut down coal-fired power plants and replace them with electricity generation from cleaner, renewable sources.

The billionaire media mogul unveiled his plans at the Washington, D.C. office of the Sierra Club. His announcement comes a day after the Trump administration started the process of rolling back former President Barack Obama's Clean Power Plan, which had been a key part of the U.S. commitment to reduce greenhouse gas emissions as part of the Paris climate agreement. "The war on coal is a fight for America's health, for our economy and our environment, and our competitive place in the world," Bloomberg said. "And it's a fight we're going to win, no matter what anybody in Washington says."

He added: "This is to save American lives and save the American economy. This is our future, and going in the wrong direction is just needlessly inflicting pain on all of us, and it has to stop."

The funding includes \$30 million to support the Sierra Club's Beyond Coal campaign through 2020 as well as funding for other groups like the League of Conservation Voters to help speed the transition to clean energy sources on the state and local level.

"These are the groups that are fighting the war on coal, and it's happening all across America," Bloomberg said.

The money will be distributed

through his Bloomberg Philanthropies organization.

Bloomberg has been the main funder of the Beyond Coal campaign since it launched in 2011. His \$30 million commitment is in addition to more than \$100 million he has dedicated for the anti-coal project in the last six years.

The Sierra Club said that since it launched the program 259 coal-fired plants – about half the U.S. total – have shut down or committed to do so.

The group claims that the closures have reduced deaths related to coal pollution by 42 percent.

Bloomberg said his donation is intended to counter Trump's pro-coal policies, including his doing away with the Clean Power Plan.

When President Obama introduced the plan in 2015, he said he wanted to reduce coal's market share for electricity generation from 30 percent to 27 percent by 2030, and emissions from coal-fired plants by 32 percent.

But critics claimed the rules would hurt the already struggling coal industry and cost states like Kentucky and West Virginia, and



successfully stymied the plan's implementation.

In August 2016, a Washington, D.C. appeals court enjoined federal agencies from enforcing the plan until various legal challenges to it could work their way through the courts.

Bloomberg said Wednesday that repealing the plan is a mistake, but "the

truth of the matter is we're already making great progress limiting carbon pollution from power plants, and we're going to continue, keep doing it, without leadership from Washington."

He noted his collaboration with California Governor Jerry Brown on a state-based effort to meet targets in the Paris agreement with or without for-

mal support from the Trump administration.

Later he said, "Whether you believe what scientists tell us about climate change or not, there's no debating that coal pollution is terrible for our health." ■

Source: <https://www.renewableenergymagazine.com/panorama/michael-bloomberg-pledges-64-million-for-anticoal-20171011>

## Karnataka Electric Vehicle and Energy Storage Policy 2017 - An initiative to promote electric vehicles



**G**overnment of India is promoting the use of Electric Vehicles (EVs) in India and has ambitious to convert all vehicles into electric powered by 2030. Karnataka has become the first state in India to issue state wide **“Karnataka Electric Vehicles & Electric Storage Policy 2017”** to develop the ecosystem for EVs.

This is first of its kind electric vehicle policy issued by the state and aims to develop Bengaluru as the EVs capital of India. Government of Karnataka (GoK) approved the policy on 13 September 2017. The key objective of the Policy is to maintain the lead share of Karnataka as a preferred destination for attracting in-



vestments in manufacture of Electric Vehicle. Further, the policy aims to attract an investment of US\$ 4.75 billion (INR 310 billion) and will create about 55,000 jobs in the state. Some of the salient features of the policy are:

1. The government will establish **EVs manufacturing zones and clusters**. The government will give incentives to manufacturers for producing modular design lithium-ion batteries with higher mileage per charge.
2. The policy encourages **subsidies for charging infrastructure in all public and private properties**, including airports, railway stations, metro stations, high-rise buildings, malls, information technology (IT) parks, and apartment complexes. The government will make amendments to building by-laws for providing

mandatory charging infrastructure in all high-rise buildings.

3. The government will also **create a special purpose vehicle** involving Bruhat Bengaluru Mahanagara Palike (BBMP), Bengaluru Metropolitan Transport Corporation (BMTCL), Bangalore Electricity Supply Company (BESCOM), Karnataka Renewable Energy Development Ltd (KREDL), Karnataka Industrial Area Development Board (KIADB) and other agencies to create more charging infrastructure in Bengaluru and Karnataka.
4. EVs will **exempt from payment of taxes from KMTV** (Karnataka Motor Vehicle Taxation) Act 1957. Karnataka has one of the highest rates of motor tax in the country.

5. The government will set-up **Karnataka Electric Mobility Research and Innovation Centre** to promote the research in the state. Further, it proposes to set up an EV skill development centre in collaboration with the industry for up skilling the work force to augment the manpower required for the EV industry. Currently, there are many companies in Karnataka which are working on electric mobility – Mahindra Electric, ANI Technologies (Ola), Bosch, Delphi and various others.

6. The policy also proposes to **establish working groups with supporting grants** for development of necessary technologies from concept to market in the areas of Drive technologies; Battery technologies; Charging infrastructure and network integration; standards and certification; materials and recycling; quality and training etc.

7. The government will provide **incentives and concessions for EV manufacture sector**, battery manufacturing, and charging equipment

enterprises throughout the State including Bengaluru District in line with the Industrial Policy 2014-19.

8. The government will encourage the **startup to develop a business model** for EVs.

The full policy document will be released soon.☐




SRI SIDDARAMAIAH  
NEW DEPUTY PRIME MINISTER OF KARNATAKA



**A vision to make  
Karnataka  
the hub for Electric Vehicles**



**To set up new EV  
manufacturing  
zones**

-  Rs 31,000 Cr Expected Investments
-  55,000 Employment Opportunities
-  Major thrust to 'Make in Karnataka' initiative
-  To set up charging stations in public and private spaces

**India's First Electric Vehicle & Energy Storage Policy 2017**

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## MEM helps investors to achieve double digit wind energy returns in SE Asia

Renewable energy development consultant Modern Energy Management (MEM) is working with investors in SE Asia to identify viable wind projects in an environment of low developer experience.



**M**odern Energy Management (MEM), a company that specialises in delivering project lifecycle certainty to renewable energy developers, financiers and investors, has been engaged by a number of investors to deliver early stage project wind and solar energy project development in Myanmar, Vietnam, Indonesia and the Philippines.

Faced with a lack of wind energy investment opportunities in these markets, investors have turned to MEM to help them initiate up to ten investible projects with a combined value of \$560 million and

capacity of 400 MW over 5 years.

Wind energy has been seen as having low deal flow in this region as inexperienced local developers in these four countries struggle to originate investable renewable energy projects. However, this is predicated on the lack of knowledge from local developers as to how to conduct early project development according to the international standards that would assure foreign investors of the balance between risks and returns.

MEM will help its investor clients identify and assess site viability at its earliest stages. In addition, the team will scope future overall site

development, including scheduling and budget to demonstrate bankability.

“Projects have to get through a number of gates that focus on risks and costs before we recommend to investors that they move forward with a broader assessment of the fundamentals” said Aaron Daniels, Managing Director of MEM, speaking about the company’s approach to initiating projects.

“Our focus is not only on finding projects with good resources, but also projects that can be built with a cost efficiency. Building wind projects in southeast Asia is complex, and requires a combination of local knowledge and wind farm development expertise. These kinds of projects carry high risks that need an experience team to manage them and ensure investors are able to realise double digit returns.”

Investors are beginning to look more closely at wind energy investments in Southeast Asia, as the potential for such projects to be successful becomes clear. Wind

farms can be built significantly faster than other infrastructure projects, offering quicker returns. However, whilst many countries in the region have good wind resources, the complexity of building projects, coupled with lack of local expertise, is slowing deal flow for investors.

Additionally, key project facets, such as resource measurement

campaigns, are not conducted in line with international standards. In Vietnam, for instance, land for wind farms is often allocated according to availability, by-passing entirely an assessment of resource suitability and potentially reducing investor returns for the lifetime of the asset.

With one eye on their exit, early stage investors will want to work

with advisors whose local knowledge and sound wind energy development experience allows them to identify the best sites and navigate untested, and often contradictory, local development laws, to deliver a project that will appeal to prospective buy-out teams at pension and insurance funds.■

Source: <https://www.renewableenergymagazine.com/wind/mem-helps-investors-to-achieve-double-digit-20171003>

## With the right policies, wind could provide 30 percent of Europe's power by 2030 says WindEurope

Wind energy has the potential to provide up to 30 percent of Europe's power by 2030 according to figures released today by WindEurope in its Outlook to 2020 and Scenarios for 2030 reports.



**A**ccording to WindEurope's projections, Europe could be on course for an average installation rate of 12.6 GW per year in the years up to 2020. This would take

Europe to a total of 204 GW by 2020. By this date wind would be Europe's largest renewable energy source, surpassing hydro and providing 16.5 percent of Europe's electricity demand. However, this

growth is likely to be concentrated in just six countries (Germany, UK, France, Spain, Netherlands and Belgium), with Central and Eastern Europe lagging well behind.

The Scenarios for 2030 report illustrates that wind energy still has enormous growth potential. It shows that wind could provide 30 percent of Europe's power by 2030 and reach a total of 323 GW.

This would also include the repowering or life-extension of the roughly half of the EU's existing wind capacity that is going to reach the end of its operational life before 2030. Reaching this milestone

will be possible if the right policies are in place and significant changes to the energy system are made. This includes greater certainty on long-term revenue stability; significant progress on the system integration of variable renewables including build-out of the grid and interconnectors; and clear policy commitments on electrification.

Germany, France and the UK would have the most installed capacity, with 85 GW, 43 GW and 38 GW respectively. France would leapfrog the UK and Spain to second place thanks to the policies being put in place by the new gov-

ernment. Meanwhile Denmark, Ireland, Estonia and the Netherlands would form an exclusive club of countries sourcing more than 50 percent of their electricity from wind by 2030.

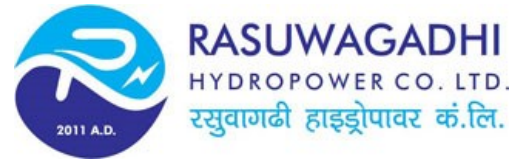
This growth would mean 382 tonnes of avoided CO<sup>2</sup> emissions annually and unlock 239 billion euros in investment from 2017-2030, enabling the wind industry to support 569,000 European jobs by 2030. It would also avoid the import of 13.2 billion euros worth of fossil fuels per annum.

“Wind energy is now firmly established as the cheapest form of new

power generation” said WindEurope CEO, Giles Dickson. “But the outlook from 2020 is uncertain. The industry needs binding and ambitious National Energy & Climate Action Plans that provide clarity on post-2020 volumes, which will allow cost reductions to continue. This requires a good outcome on the EU Clean Energy Package. With an ambitious European renewables target of at least 35 percent by 2030, the wind industry could deliver even bigger volumes at competitive cost.” ■

Source: <https://www.renewableenergymagazine.com/wind/with-the-right-policies-wind-could-provide-20170926>

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Investment Board of Nepal  
Government of Nepal



Energy Development Council (EDC) is a non-profit umbrella organisation of the entire energy sector of Nepal established to ensure every Nepali has access to energy and energy security by promoting favourable policies and investments. EDC consists of Energy Developers, Energy Associations, Energy Consumers, Energy Financiers and other funds, Consumer Institutions, Energy Contractors from both private and government sectors involved in hydropower, solar, wind and other renewables, generating more than 80 percent of the nation's total electricity.

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