ORGANISED BY

INDIAN INDUSTRIES ASSOCIATION

NISS North India Solar Summit

NORTH INDIA SOLAR SUMMIT

KNOWLEDGE PARTNER

LIVE WITH POWER

STARTLING SOLAR

vkb-vkb-,- }kjk in"k dh jkt/kkuh esa vk;kftr iFke f=fnolh; lkSj ÅtkZ in"kuh ukFkZ bf.M;k lkyj lfeV **NISS** esa gtkjksa ykxksa us dh f"kjdr

mRrj in"k esa ubZ lkSj fufr&2012 cuus ij vkb-vkb-,- us igyh ckj mRrj Hkkjr esa l{ke] y?kq ,oa e/;e m|fe;ksa dks lkSj ÅtkZ dh mi;ksx ,oa ykHk ds ifr tkx:d djus ds mn~ns"; ls "North India Solar Summit-2014" dk vk;kstu dh igy dhA blds vk;kstu ds fy, vkb-vkb-,- us viuk Knowledge Partner eEcbZ dh LVkVfyax lksyj ikoj fy0 ds lkFk gkFk feyk;kA mRrj Hkkjr esa igyh ckj vk;kftr fd;s tkus okys bl lfeV dh r;kfj;k yxHkx ,d o'kZ iwoZ ;kuh vçSy] 2013 esa ikjEHk dj nh xbZ FkhA vkSj ;g fu.kZ; fy;k x;k fd ** North India Solar Summit-2014 11-13 ebZ 2014 dks vkb-vkb-,- Hkou y[kuÅ ds ikax.k esa vk;ksftr fd;k tk,xkA

**North Indian Solar Summit-2014 NISS dks vk;kftr djus ds fy, fuEufyf[kr rhu mn~ns"; fu/kkZfjr fd, x,%&

1- lHkh idkj ds ?kjsyw okf.kT;d ,oa vkS|kfxd ifr'Bkuksa esa lkSj ÅtkZ ds mi;ksx dks c<kok nsuk rFkk vko";d tkudkfj;k inku djukA

2- Solar Power Plant LFkkfir djus ds fy, fuos"kdksa dks tkudkfj;k miyC/k djkuk ,oa mudks lEcfU/kr n"kh@fon"kh dEifu;ksa ds lkFk feyokukA

3- Solar Power Generation vkj mi;ksx esa i;Dr gksus okys midj.kk ,oa lkexh ds fuekZ.k lEcU/kh mRiknu bdkb;ksa LFkkfir djus ds fy, bPNqd m|fe;ksa dks tkudkfj;ka miyC/k djkukA

Rknqijkar NISS dh ,d oSclkbM www.niss.org.in fMtkbu dh xbZ ftlds ek/;e ls Summit dh lHkh tkudkfj;ka ij fo"o esa iilkfjr dh xbA blds lkFk&lkFk mRrj in"k ljdkj esa Additional Sources of Energy ds ie[k lfpo] vkS|kfxd fodkl vk;Dr rFkk Mk;jsDVj NEDA ds lkFk Hkh bl vk;kstu ds ckjs esa ppkZ; dh xbA Jh fto"k ÙkUnu vkb-vkb-,- ie[k lfpo Additional Sources of Energy U.P. us in"k ljdkj dh vkj ls bl egRoi.kZ vk;kstu ds fy, i.kZ lg;ksx inku djus dk vk"oklu fn;k rFkk NEDA dks NISS dk lg& vk;kstd Hkh cuk;k x;kA

;g vk;kstu i.kZ :i ls lQy gks ldsa] blds fy, v/;{k vkb-vkb-,- us vuHkoh vkb-vkb-,- inkf/kdkfj;ksa dh ,d Co-ordination Committee Hkh xfBr dh ftlds p;jeSu Jh lt; dkyjk ioZ v/;{k vkb-vkb-,- dks cuk;k x;kA Jh th- lh- pronh iwo v/;{k vkb-vkb-,- ,oa Jh euh'k xks;y ofj'B mik/;{k vkb-vkb-,- bl desVh esa vkb-vkb-,- dh vkj ls vU; nks lnL; FksA Jh vuqt fuxe Mk;jsDVj Startling Solar Pvt. Ltd. Hkh bl desVh ds lnL; FksA bl desVh dks lEi.kZ Secretarial Support IIA Head Office ds depkfj;ksa rFkk vk;kstu ds lg;kxh Startling Solar Pvt. Ltd. }kjk fu;Dr fo"ks'kKksa }kjk inku fd;k x;kA

vk;kstu ls i.kZ NISS ds ipkj iilkj ds nkjku lkSj ÅtkZ ls tqMs rFkk vud vU; ukeh &fxjkeh n"kh@fon"kh dEifu;ksa@lLFkkuksa dks lg;kx Hkh ge feyk ftuesa ie[k Solartys,Aliter,Kriti Solar ltd., NEDA,ZDH -SEQUA bR;kfn FkA

lkSj ÅtkZ dh egRrk ,oa blds lEHkkoukvksa dks n[kr g, 40 ie[k dEifu;ksa us ftlesa Scain Solartys, Scain Aliter Hensel (Germany)] fon"kh dEifu;ka Hkh Fkh ftUgksua Exhibitors ds :Ik esa ithdr djk;kA bu dEifu;ksa ds uke fuEufyf[kr gS&

Akshaya Solar Pvt Ltd, India., Aliter Group, Spain, Alpex Exports Pvt Ltd, India., ARKA Solar, India., Bhansali cables and conductors Pvt ltd, India., Chemtrols Solar, India, Deity Fuel Energy Pvt Ltd, India.,Global Solar & Alternative Energies, Hensel Electric India., Indy Green technologies Pvt ltd, India., Kirti Solar Ltd., Krashi Bhoomi Fertilizers Pvt Ltd, India., Krishna Natural Energy, India, Plaza Solar, India, REN EN GEN Solar Solutions, India, RK Engineers Sales Ltd., Solartys, Spain., Solar Quarter., Space Product Finder., Sparco Batteries Pvt Ltd, India., Spark International, India, Startling Solar Pvt Ltd, India., Sun Digital solutions Pvt ltd. Sunswitch India Pvt. Ltd., Supreme Solar Pvt Ltd, India, Trade Fair Times., Thrive Energies Pvt Ltd, India., UPNEDA., Vacon India., Vodafone, India.

bl egRoi.kZ volj dks lQy cukus ds fy, v/;{k iekn fexykuh ds urRo esa lHkh vkb-vkb-,- inkf/kdkfj;ks] io vkb-vkb-,- v/;{kks] dfUn; dk;kfj.kh lnL;ksa us Hkh i.kZ lg;ksx fd;kA

blds vfrfjDr ZDH - SEQUA, Vodaphone, SIDBI, UPNEDA, NSIC, Trustfort, REN-EN-GEN,SOLARTYS, SOLAREX, SOLARQUARTER, SESI, dk Hkh bl vk;kstu esa i.kZ lg;kx jgkA

Tkc 11 ebZ 2014 dks lkyj lfeV dk ikjEHk gvk rks lHkh dh egurs] lg;kx vkj "kHkdkeuk, jx ykb vkj gtkjks ykxks us bl lfeV esa vkdj viuh fnypLih fn[kkbA

bl lkSj ÅtkZ lfeV esa fjdkM 1000 ls vf/kd fctusl bUDok;jh tujV gb rFkk yxHkx 1500 ykxks us fgLlk ysdj viuh fnypLih fn[kkbA

iFke fnu & **NISS-2014**] 11 ekp]14

bl rhu fnoh; lEeyu dk mn|kVu e[; vfrfFk Jh tho"k UkUnu vkb-,-, l- ie[k lfpo] vfrfjDr Åtk lkr m0i0 ljdkj d dj deyk }kjk lEiUu gvkA loiFke mUgku fjcu dkVdj Summit dk fof/kor ikjEHk fd;k rFkk Summit e LFkkfir lHkh Exhibitors d LVkyk e inf"kr lkeku e xgjh :ph yhA

NISS-2014 d mn?kkVu lekjkg ij v/;{k vkb-vkb-,- iekn fexykuh u dgk fd ij in"k ,o mRrj Hkkjr d fy, ;g fo"k'k fnu g tc lkj Åtk ij igyk vkj lcl cMk vk;k tu vkb-vkb-,- gM vkfQl d ikx.k e vk;kftr fd;k tk jgk gA mUgku dgk fd ;g vc lofofnr g fd ijkEifjd Åtk Lkkr ,d fnu lekIr gk tk,x ,l e lkj Åtk lkr ,o vU; odfYid Åtk LkkrgheIgk;d gA ble Hkh lkj Åtk d{k= e lcl vf/kd lEHkkouk, gA foxr dN le; rd lkj Åtk }kjk fo|r d mRiknu dh ykxr ,o ifr ;fuV dher cgr vf/kd Fkh ijUr vkt ;g vU; Åtk lkrk l mRikfnr fo|r d cgr djhc igp xb gA ;fn lkj fo|r Åtk mRiknu l;= dk dk;dky n[kk tk, rk ;g ykxr dN o'kk e gh recover gk tkrh gA

rri"pkr tk Hkh fo|r ikIr gkxh mld fy, doy **Nominal Maintenance Cost** gh yxkuh iMxhA v/;{k iekn fexykuh u dgk fd vkt Hkkjr e ifr 0;fDr lkj Åtk dh [kir fo"o d vx.kh"kk dh ryuk e cgr de g tcfd l ; gekj n"k ij vf/kd egjcku gA vkb-vkb-,- }kjk lkj Åtk dk vkt d lnHk e egRo le>r g, **North India Solar Summit** Startling Solar (Knowledge Partner IIA), Mumbai d lg;kx l vk;kftr fd;k tk jgk g rkfd T;knk l T;knk ykxk dk lkj Åtk d ifr tkx:drk gkA

vut fuxe fun"kd LVkVfyx lkyj ikO fy0 u dgk fd vkt ij fo"o e ykx ikjEifjd Åtk l gV dj vfHkdj.kh; Åtk dh rjQ ifjr gk jg gA ble Hkh lkj Åtk dk lcl T;knk 0;kid mi;kx gA ;gh ,dek= vfHkdj.kh; Åtk dk L=kr g] tk fd ,d okV l ydj fdykokV ,o exkokV rd mi;kx fd;k tk ldrk gA ;g ukFk bf.M;k lkyj lfeV dk mnn"; g fd turk dk fofHkUu idkj d lkj midj.kk l voxr djk;k tk,A bld lkFk gh ;g Hkh dkf"k"k g fd tk dEifu;k ;gk ij viu mRikn inf"kr dj jgh g] mudk Hkh xkgdk l feyu dk ekdk feykA mRrj in"k vcknh d ekin.M ij n"k dk lCkl cMk jkT; g blfy, gekjh dkf"k"k jgxh fd lkj Åtk dk fodkl bl in"k e lcl T;knk gkA

ie[k lfpo tho"k UkUnu u viu mnn?kkVu Hkk'k.k e dgk fd mRrj in"k ljdkj cgr tYn **Roof Top Solar** uhfr yku okyh g ft ldk iFke vky[k yxHkx r;kj g bl LVdgkYMl l deUV ,o l>ko vkef=r dju gr tYn gh ;-ih- uMk dh oclkbV lkj miyC/k djk;k tk,xkA m0i0 ljdkj e ykfg;k vkokl ;ktuk d rgr yxHkx 40]000 ykfg;k vkoklk e lkyj ykbV ,o i[kk LFkkfir dju dk n< ldYi fy;k gA 100 exkokV lkyj ikoj tuj"ku d fy, m0 i0 ljdkj u NHPC d lkFk MOU Hkh lkbu fd;k gA

mUgku lkj Åtk ,o Åtk i.kkyh d egRok ij idk"k Mkyk vkj dgk fd lkj ifr'Bkuk dk fodUnhdr dju dh vko";drk g rkfd xkok dh t:jrk dk ijk fd;k tk ldA


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2014


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bll io Jh lt; dky] p;jeu NISS Co-Ordination Committee u lcdk Lokxr fd;k vkj bl lfeV dk vk;kftr dju d mnn"; d ckj e foLrkj l crk;kA bl lekjkg e ofj'B vfrFk d :lk e Jh t- ih- flg fun"kd ;-ih- UkMk ,o Jh dkfrd,u ikt DV Mk;jDVj ZDH/SEQUA mifLFkr FkA vUr e ofj'B mik/;{k Jh euh'k xk;y u okV vkQ FkDl fn;kA bl lekjkg e in"k Hkj l 200 l vf/kd vkb-vkb-,-d inkf/kdkfj;k u Hkkx fy;k k

nljk fnu **NISS-2014**] 12 ekp]14

ukFk bf.M;k lkyj lfeV d nlj fnu lkj in"kuh d lkFk&lkFk egRoi.k lfeukj Hkh vk;kftr fd;k x;k ftldk mnn"; **lkj Åtk vui;kx ,o mRiknu** d ifr tkx:d djkuk FkkA

lkyj lfeV d nlj fnu e[; vfrFk Jh Mh-Mh- oek¼lokfuor½ vkb-,-l- v/;{k ;-ih- b- vkj- lh- u **lkj Åtk vui;kx ,o mRiknu** ij vk;kftr lfeukj dk mn?kkVu 12 ekp] 2014 dk vkb-vkb-,-e fd;kA bl lfeukj dh "k:vkr egk lfpo vkb-vkb-,-uhjt fl?ky }kjk dh xbA

lfeukj e rhu rdfudh l= FkA&
1-igyk rduhfd l=k& lkyj ikoj tuj"ku fxM ftle e[; oDrk Jh tfo;j ikLVj] v/;{k] lkykfIV] Liu ,o Jh tjkM itl] CFO] tfyVj xi Liu FkA
2-nljk rduhfd l=k& lkyj ikoj dkmi;kx ftle e[; oDrk vut fuxe] Mk;jDVj LVkVfyx lkyj ,o Jh lrk'k ykyokuh] p;jeu REN--EN-GEN Soluts Pvt.Ltd. FkA
3-rhljk rduhfd l=k& lkyj bD;ieUV eU;QDVfjx ,.M lfol ftle e[; oDrk Jh nhid tu] MD Bhansali Cables] Jh vkj- d- cly Likjdk Batteries. Jh oh-d- frokjh ifj;kt uk vf/kdkjh UPNEDA u viuh viuh iLrfr;k nhA
lfeukj e Jh Mh- Mh- oek u lkj Åtk ,o Åtk i.kkyh d egRok ij fuEufyf[kr ckrk ij tkj fn;k&

1-m0i0 lkj Åtk uhfr 2012 d rgr o'k 2017 rd 200 exkokV dh Capacity building dk y{; r; fd;k x;k gA
2-lkj ifr'Bkuk dk fodfUndr dju dh vko"; drk g rkfd xkok dh t:jrk dk ijk fd;k tk ldA
3-gj m|eh ,o m|fe;k d leg d fy, :Q Vki ifr'Bkuk dk fuek.k fd;k tkuk pkfg, ft ld fy, m|fe;k dk ,d fu/kkfjr y{; nuk gkxk rkfd lkj Åtk fLVe dk fpjLFkk;h cuk;k tk ldA
4-bl rjg d lfeukj d ek/;e l ykxk dk d"ky ,o ftEenkj cuk;k tk ldrk gA
5-vyx&vyx rjg d dk"ky fodkl dk;Øek dk vk;k tu dju l ykxk dk bl {k= e if"k{k.k inku fd;k tk ldrk gA
6-okf.kfT;d lxBuk foRrh; lLFkkvk] vkokl foHkkx] uxj fuxe ,o vU; foHkkxk l tMk jguk vko"; d g rkfd bl rduhd dk Hkyh Hkkfr ,o fujUrj c<k;k tk ldA

Rkduhdh l= d nkjku Jh tjkb it l e[; foRrkf/kdkjh] ,fYVj] Liu] Jh tfo;j iLVj] v/;{k] lkykjfVl] Liu] Jh vut fuxe fun"kd LVkVfyx lkyj] Jh lrk'k ykyokuh REN-EN-GEN] Jh oh- d- frokjh] ifj;ktuk vf/kkjh ;-ih- uMk u lkj Åtk d fo'k; e ykHknk;d iLrfr;k nhA
;g lfeukj d ek/;e l vkb-vkb-,- u lkj Åtk d ykHk d ckj e ykxk e tkx:drk dk fuek.k ,o f"kf{kr dju dh vuBh igy dhA

rhljk fnu NISS-2014] 13 ekp]14

bl rhu fnolh; lkj Åtk in"kuh ,o lEeyu dk lekiu 13 ekp] 2014 dk gvkA NISS d lekiu l= e ehuk{kh flg vkb-vkj-,- l- ¼lokfuoRr½ lnL; ;-ih-b-vkj-lh- e[; vfrfFk FkhA lekiu l= e **fofHkUu {k=k e dke dju oky m|kxk dh lLFkkvk dk tkx:d dju d fy, Quality Council of India, fnYyh l vk, Jh fofiu lkguh ,o fel j[kk dky u Hkh viuk iLrfrdj.k fn;kA
e[; vfrfFk ehuk{kh flg vkb-vkj-,- l- ¼lokfuoRr½ lnL; ;-ih-b-vkj-lh- u dgk fd vkt dy lHkh ykx buoVj vkj tujVj l rx vk pd g& lkj Åtk vkt dh vko"; drk gA mUgku vujk/k fd;k fd m|fe;k dk lkj Åtk d {k= e m|kx yxku pkkfg, D;kfd lkj Åtk dk m|kx gh Hkfo'; dk m|kx gA mUgku dgk fd Lkjdkj d }kjk lk; Åtk mRiknu d fy, fofHkUu ;ktuk, py jgh g mld rgr dkb m|kx yxku d fy, vkx vk,xk m ldk ge rjUr ykbl Ul inku dju dk i;kl djxA

Lkekiu l= dh v/;{krk dj jg vkb-vkb-,- d egkLfpo uhjt fl?ky u vkb-vkb-,- }kjk fd, x, lkj Åtk in"kuh ,o lEeyu d igy i;kl dh lQyrk ij lHkh dk /kU;okn nr g, vxy o'k NISS vkj cM vk/kkj ij vk;kftr dju dh ?kk'k.kk dhA mUgku ; Hkh crk;k fd bl rhu fnolh; vk;ktu d ek/;e l gekj m|fe;k d chp lk; Åtk l lEcfU/kr m|kx yxku d fy, ,d tkx:drk vkb g rFkk m|kxk d lkeu [kMh lcl cMh leL;k &fct yh dh pukrh dk nj dju d fy, bl nlj ek/;e dh rjQ igyk dne c<k;k gA mUgku dgk fd vkb-vkb-,- u "k:vkr dj nh g] vc ljdkj dh ckjh g bl tu &tu rd igpku dhA Hkfo';e bldh vko";drk dk n[kr g, ljdkj l vi{kk g fd bld rgr m|kx yxku d fy, ub lkj uhfr e dN lgfy;r m|fe;k dk inku dj ft l l fd in"ke lkj Åtk mRiknu dh Økfr vk ldA

bl lekjkg e e[;vfrfFk ehuk{kh flg vkb-vkj-,l-¼lokfuoRr½ lnL;;-ih-b-vkj-lh-]Quality Council of India d fofiu lkguh ,o fel j[kk dky] l t;dky p;jeu ,u-vkb-,l-,l-] uhjt fl?ky] egkLfpo vkb-vkb-,-] th-lh-pronh] eEcj] ,u-vkb-,l-,l-dkfMu"ku dfefV i"kkUr HkkfV;k fMfotuy p;jeu vkb-vkb-,- lfgr ldMk m|eh mifLFkr FkA lekiu l=e m|fe;k d vkykok fofHkUu vk|kfxd lxBuk u Hkh c< p< dj Hkkx fy;kA

bl rhu fnolh; vk;ktu e vke ukxfjd l ydj m|fe;k rd u cMh l[;k e Hkkx fy;k vkj ykHkkfUor g,A

PRESS COVERAGE NISS 2014

नवभारत टाइम्स । नई दिल्ली/लखनऊ । बुधवार, 12 मार्च 2014

'सौर ऊर्जा और पारम्परिक ऊर्जा की लागत बराबर होगी'

नॉर्थ इंडिया सोलर समिट में कई कंपनियों ने हिस्सा लिया।

एनबीटी, लखनऊ : आने वाले दो साल में पारम्परिक ऊर्जा और सौर ऊर्जा की लागत बराबर होगी। मौजूदा समय में सौर्य ऊर्जा की एक यूनिट का खर्च जहां 6 रुपये 30 पैसा है, वहीं पारम्परिक ऊर्जा का खर्च पांच रुपए प्रति यूनिट है। यह बात प्रदेश सरकार के औद्योगिक विकास आयुक्त आलोक रंजन ने कही। वे मंगलवार को इंडियन इंडस्ट्रीज असोसिएशन की तरफ से चल रहे तीन दिवसीय कार्यक्रम नॉर्थ इंडिया सोलर समिट में बतौर मुख्य वक्ता बोल रहे थे। तीन दिन तक चलने वाले कार्यक्रम में पूरे देश की 40 कंपनियों के 500 से ज्यादा प्रतिनिधि हिस्सा ले रहे हैं। इस मौके पर कंपनियों की तरफ से अपने प्रोडक्ट्स की प्रदर्शनी लगाई गई, जिसमें उनकी खूबियों और सौर ऊर्जा में उनके इस्तेमाल की जानकारी दी गई। कार्यक्रम गुरुवार तक चलेगा।

सोलर एनर्जी बनेगा ऊर्जा स्रोत का विकल्प

शुक्रवार, 14 मार्च 2014

हिन्दुस्तान

...ऊर्जा ही है भविष्य क...

उन्होंने कहा कि सरकार सौर ऊर्जा उत्पादन के लिए विभिन्न योजनाएं चला रही है। इसके तहत कोई उद्योग लगाने के लिए आगे आएगा तो उसे तुरंत लाइसेंस दिया जाएगा। कार्यक्रम की अध्यक्षता कर रहे आईआईए के महासचिव नीरज सिंघल ने कहा कि ...ने सबसे बड़ी समस्या ...नीति को दूर करने के लिए ...ढ़ावा देना चाहिए। उन्होंने ...सौर ऊर्जा नीति बनाने की...

...यर

...2 मार्च, 2014

यूपी सरकार जल्द ला रही रूफ टॉप सोलर नीति: जावेश...

लखनऊ। प्रमुख सचिव एडिशनल सोर्सेज ऑफ एनर्जी जीवेश नन्दन ...त्तर प्रदेश सरकार बहुत जल्द रूफ ...पि सोलर नीति लाने वाली है ...जिसको स्टेकहोल्डर्स से कमेन्ट एवं ...सुझाव आमंत्रित करने हेतु जल्द ही ...पी. नेडा की साइट पर उपलब्ध ...गा। वे आज यहां इंडियन इंडस्ट्रीज ...सोसिएशन द्वारा आयोजित नार्थ ...डियन सोलर समिट 2014 के ...द्घाटन समारोह को संबोधित कर ...थे। उन्होंने कहा कि उ0प्र0 साथ ही उ0प्र0 सरकार द्वारा 100 मेगावाट सोलर पॉवर जनरेशन के लिए एनएचपीसी के साथ एमओयू साइन कर चुकी है। आईआईए के अध्यक्ष प्रमोद मिगलानी ने कहा कि प्रदेश एवं राष्ट्रीय सरकारें सौर ऊर्जा उत्पादन एवं उपयोग के लिए अनेक योजनाएँ बना रही है फिर भी कुछ मुख्य मुद्दों का अभी समाधान बाकी है इस मौके पर मेरा प्रदेश सरकार से अनुरोध है कि नेट मीटरिंग प्रणाली का क्रियान्वयन...

नार्थ इंडियन सोलर समिट का...

चार्जेज से राह... उन्होंने कहा कि... में प्रदर्शनी प्रातः... बजे तक तो खु... अतिरिक्त 12 मा... का भी आयोज... स्टार्टलिंग सोलर... निगम ने कहा कि... लोग कन्वेंशनल... रिनेबल एनर्जी क... हैं। इसमें भी सौ... ज्यादा व्यापक... रिनेबल एनर्जी क... एक वाट से लेक... और मेगावॉट तक... किया जा सकता... नेडा के डायरेक... एनआईएसएस के... कौल, आईआईए... गोयल, म... एवं जेड... डायरेक्टर...

गोमतीनगर स्थि... मनीष गोयल, जे...

प्रदेश

17-23 मार्च 2014

बिजनेस लिंक

सूबे में बनेगी सौर ऊर्जा नीति

घर की छत पर बनेगी बिजल...

- सरकार की रूफटॉप सौर नीति जल्द
- कम हुई है सौर्य ऊर्जा उत्पादन लागत
- सौर ऊर्जा से 1000 मेगावाट बिजली पैदा करने का लक्ष...
- 100 मेगावाट सोलर पावर जनरेशन के लिए एनएचपीसी से हो चुका है समझौता
- लोहिया आवास योजना के 40,000 आवासों में लगेगा सोलर लाइट व पंखा

कार्यालय संवाददाता

लखनऊ। इंडियन इंडस्ट्रीज एसोसिएशन (आईआईए) द्वारा आईआईए भवन में तीन दिवसीय सौर ऊर्जा सम्मेलन और प्रदर्शनी का आयोजन किया गया। जिसमें देश एवं विदेश की 40 मुख्य सोलर कम्पनियों व संस्थाओं ने भाग लिया। कार्यक्रम के मुख्य वक्ता के रूप में बोलते हुए औद्योगिक विकास आयुक्त आलोक रंजन ने कहा कि आने वाले दो साल में पारम्परिक ऊर्जा और सौर ऊर्जा की लागत बराबर होगी। मौजूदा समय में सौर्य ऊर्जा की एक यूनिट का खर्च जहां 6 रुपये 30 पैसा है, वहीं पारम्परिक ऊर्जा का खर्च पांच रुपए प्रति यू... विशिष्ट अतिथि के रूप में प्रमुख स... अतिरिक्त ऊर्जा स्रोत जीवेश नंदन, प्रमुख... सूक्ष्म लघु एवं मध्यम उद्योग एवं निर्यात प्रो... महेश कुमार गुप्ता और आईईएस प्रमुख सचिव... एवं जनसम्पर्क विभाग नवनीत सहगल शामि... तीन दिन तक चले कार्यक्रम में पूरे देश ... कंपनियों के 500 से ज्यादा प्रतिनिधि हिस्सा... इस मौके पर कंपनियों की तरफ से अपने प्रो... की प्रदर्शनी लगाई गई, जिसमें उनकी खूबि... सौर ऊर्जा में उनके इस्तेमाल की जानकारी... प्रदर्शनी में वहां गाजियाबाद की कंपनी ने '...

नार्थ इंडिया सोलर समिट

सोलर स्पेशल इकोनामिक जोन को बढ़ावा देने पर जोर दिया गया। ताकि सोलर उत्पादों से इंडस्ट्री भी चल सके... ...जिससे उद्योगों को सोलर ऊर्जा का बढ़ावा... ...सोलर स्पेशल इकोनामिक जोन (एसईजेड) नहीं बन सका जबकि गुजरात में इसे बढ़ावा देने के लिए एसईजेड बन चु... ...यूपीनेडा (उ0 नवीन एवं नवीकरणीय ऊर्जा विकास अभिकरण) ने एक बार फिर इसकी कवायद शुरू की है। इस... ...लिए उद्यमियों को 25 प्रतिशत तक सब्सिडी दी जाएगी। नार्थ इंडिया सोलर समिट (एनआईएसएस) के दौरान अ... ...यूपीनेडा के निदेशक जेपी सिंह ने सौर ऊर्जा के उप... ...यूपीनेडा के कार्यक्रम अधिकारी वीके तिवा...

अमरउजाला

5

लखनऊ। बृहस्पतिवार। 13 मार्च 2014

सौर ऊर्जा को बढ़ावा देने के लिए एसईजेड जरूरी

यूपी में अभी तक नहीं बन सका सोलर स्पेशल इकोनामिक जोन

लखनऊ (ब्यूरो)। सौर ऊर्जा के लिए बड़े-बड़े वादे तो हुए लेकिन 30 साल में यूपी अपना स्पेशल इकोनामिक जोन (एसईजेड) नहीं बना सका जबकि गुजरात में इसे बढ़ावा देने के लिए एसईजेड बन चुका है। यूपीनेडा (उप्र नवीन एवं नवीकरणीय ऊर्जा विकास अभिकरण) ने एक बार फिर इसकी कवायद शुरू की है। इसके लिए उद्यमियों को 25 प्रतिशत तक सब्सिडी दी जाएगी।

बुधवार को नार्थ इंडिया सोलर समिट (एनआईएसएस) के दूसरे दिन आयोजित चर्चा में विशेषज्ञों ने इस क्षेत्र को बढ़ावा देने की बात कही। यूपीनेडा के निदेशक जेपी सिंह ने सौर ऊर्जा के उपयोग पर कहा, यह भविष्य का ऊर्जा स्रोत होगा। वहीं, अपने प्रजेंटेशन में यूपीनेडा के कार्यक्रम अधिकारी वीके तिवारी ने माना कि हम एसईजेड बनाने में सफल नहीं हो...

राजधानी में सौर ऊर्जा प्रदर्शनी के दूसरे दिन के सत्र में मौजूद नीरज सिंघल, डीडी वर्मा और प्रमोद मगलानी।

फैक्ट फाइल

- 2030 तक यूपी को 800 गीगावाट बिजली की जरूरत
- वर्तमान में 185 गीगावाट का ही उत्पादन
- 1.9 प्रतिशत ऊर्जा स्रोत यूपी में
- 308 किलोवाट प्रतिवर्ष प्रति व्यक्ति ऊर्जा की खपत
- 32.33 प्रतिशत बिजली का लाइन लॉस

75 प्रतिशत बढ़ा मार्केट

जवाहर लाल नेहरू सोलर मिशन-2010 आने के बाद सोलर पैनल का मार्केट 75 प्रतिशत बढ़ा है। 2011 में इसमें 50 प्रतिशत की बढ़ोतरी दर्ज की गई। अब इसमें 2022 तक 20,000 मेगावाट बिजली पैदा करने का लक्ष्य है। वहीं, आफ ग्रिड 2000 मेगावाट का उत्पादन किया जाएगा। ...करने के लिए हमें एसईजेड की ... इसके लिए काम कर रहे हैं...

HINDUSTAN TIMES, LUCKNOW
THURSDAY, MARCH 13, 2014

Decentralise solar installations for better reach, say experts

LUCKNOW: The second day of the North India Solar Summit 2014, organised by the Indian Industries Association (IIA), saw a seminar on 'Solar energy applications and generations'.

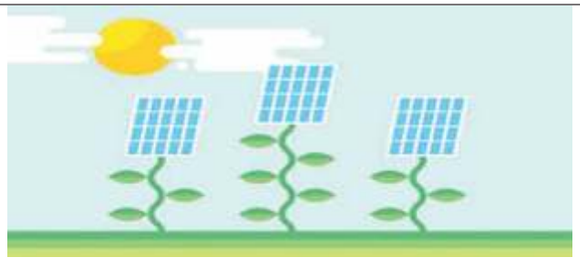
Experts in the field highlighted the importance of solar energy and the need for installing solar panels for electrification. They emphasised that solar installations must be decentralised to cater to the needs of villages.

"Roof top installations for individuals and group of entrepreneurs can be built for which entrepreneurs can be assigned a target of a particular number of villages so that a self-sustained mechanism can be made," a speaker at the summit, said on Wednesday.

During the technical session, presentations were made by Gerard Pages, CEO, Aliter Group Spain, Xavier Pastor, president of Solartys, Spain, Anuj Nigam, director of Startling Solar, VK Tiwari of UPNEDA and Amit Kumar of SIDBI.

IIA media co-ordination cell chairman Prashant Bhatiya said the event brought together about 40 companies from India and abroad to discuss possibilities of solar power in the state.

"Solar power is inevitable as it can fill the gap between demand and supply of power," he said.



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dN o'k io rd lkj Åtk dh egRrk ij fdlh dk /;ku ugh Fkk] ij thok"e b/ku dh deh d dkj.k lkj Åtk dh rjQ fo"k'kKk u vul/kku fd, gA vud m|kxk e lkj Åtk dk viuku d i;kl fd, tk jg gA ,l db fo'k; {k=k e lkj Åtk dk i;kx tkjh g tgk vU; Åtk L=krk dh igp de gA

lkj Åtk dk fofo/k idkj l i;kx fd;k tkrk g fdUr l; dh Åtk dk fo|r Åtk e cnyu dk gh e[; :Ik l lkj Åtk d :Ik e tkuk tkrk gA

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2- idk"k fo|r fof/k &¼QkVk byfDVd ¼PV½½ bl fof/k e lkj Åtk dk fctyh e cnyu d fy, QkVk okYVd lyk dk i;kx gkrk gA

lkj Åtk dh fo"k'krk,¼& l; l lh/k ikIr gku okyh Åtk e db [kkl fo"k'krk, gA bue bldk vR;f/kd foLrkfjr gkuk] vin'k.kdkjh gkuk o v{k.k gkuk ie[k gA

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- lkj Åtk dk;yk vkfn ikjEifjd fo|r mRiknu d foijhr in'k.k jfgr g ,o LoPN Åtk mRiUu djrh gA
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lkj Åtk fofHkUUk vui;kxk d fy, mi;kx fd;k tk ldrk gA ftle e[;r% Grid-Interactive d fy, rFkk lkj Åtk dk mi;kx Off-Grid fo|r mRiknu d fy,A

a)Grid-Interactive lkj Åtk lkj QkVkokfYVo ly l ikIr fd;k tkrk gA

b)Off-Grid lek/kku d fy, lkj Åtk ftu {k=k ij vk lkuh l fxM dUkfDVfoVh g ykx ogk fxM dk mi;kx dj jg gA ijUr tgk ;g vYi ,o yku e egxk g ogk ykx thok"e b/ku ¼Mh ty]xl½ ,o LFkkuh; Lrj ij miyC/k uohdj.kh; Åtk ik|kfxdh ¼lkj PV, Biomass vkfn½ dk mi;kx dj NkV LFkkuh; tujVj dh ,d fofo/k jt l fctyh mRiUu djr gA ;g vkQ fxM fctyh d :Ik e ekuk tkrk gA

lkj Åtk dk mi;kx%&

lkj Åtk dk mi;kx e[;r% fo|r mRiknu gr fd;k tk jgk gA QkVkokYVkf;d ¼PV½ i.kkyh }kjk lkj idk"k dk fctyh e :ikUrfjr djd jk"kuh ikIr dh tk ldrh gA Air-conditioning dk dk; fd;k tk ldrk gA Vyhfotu] jfM;k vkfn pyk, tk ldr g rFkk i[ko ty iEi vkfn Hkh pyk, tk ldr gA

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lkj ykyVu%& lkj ykyVu ,d QkVk okYVkf;d r=g bld vUrxr ykyVu] j[kko cVjh] byDVkfuDl ykyVu] j[k j[kko cVjh] byDVkfuDl fu;rd i.kkyh] 7 okV dk NkVk] ¶yvkj lUV yEi ;Dr ekM;y vkrk gA ;g ?kjd vUnj o ?kjd ckgj ifrfnu 3 l 4 ?kV rd idk"k n ldu e l{ke gA nlj ykyVu dh rjgn ldue l{ke gA nlj ykyVu dh rjg u rk bll /kvk fudyrk g u vkx yxu dk [krjk g vkj u LokLF; dkA vc rd 2-5 yk[k l T;knk ykyVu n"k d xkeh.k bykdk e dk;jr gA

lkj ty iEi%&QkVk okYVkf;d i.kkyh }kjk ikuh l flpkb d fy, dvk vkfn l ty dk iEi fd;k tkuk Hkkjr d fy, ,d vR;Ur mi;kxh i.kkyh gA lkekU; ty iEi i.kkyh e 900 okV dk QkVk okYVkf;d ekM;y] ,d ekVj ;Dr iEi gkr gA ftll flpkb d fy, ikuh dk iEi djd txg&txg igpk;k tk ldrk gA

lkj QkVk okYVkf;d dk;Øe%& lkj QkVk okYVkf;d rjhd l Åtk] ikIr dju d fy, l; dh jk"kuh dk lehdUMDVj dh cuh lkyj ly ij Mky dj fctyh ink dh tkrh gA bl i.kkyh e l; dh jk"kuh l lh/k fctyh ikIr dj db idkj d dk; lEikfnr fd, tk ldr gA Hkkjr mu vx.kh n"kk e l ,d g tgk QkVk okYVkf;d i.kkyh ik|kfxdh dk lefpr fodkl fd;k x;k g ,o bl ik|kfxdh ij vk/kkfjr fo|r mRiknd bdkb;k }kjk vud idkj d dk; lEiUu fd, tk jg gA Hkkjr ljdkj dk vkjEifjd Åtk lkr e=ky; lkj ykyVu] lkj xg] lkj lkotfud idk"k i.kkyh] ty iEi ,o xkeh.k {k=k d fy, ,dy QkVkokYVkf;d Åtk l;=k d fodkl lLFkkiuk vkfn dk ikRlkfgr dj jgk gA

xkeh.k fo|rhdj.k ¼,dy fctyh ?kj½& QkVk okYVkf;d lyk ij vk/kkfjr bu fctyh ?kjk l fxM Lrj dh fctyh xkeokfl;k dk inku dh tk ldrh gA bu fctyh ?kjk e vud lkj lyk d leg] LVkjt cVjh ,o vU; vko";d fu;=d midj.k gkr gA fctyh dk ?kjk e forfjr dju d fy, LFkkuh; lkj fxM dh vko";drk gkrh gA bu l;=k l fxM Lrj dh fctyh 0;fDrxr vkok lk] 0;kikfjd dUnk dk inku dh tk ldrh gA budh {kerk 1-25 fdykokV rd gkrh gA ,l l;=n"k d fofHkUu fgLlke yxk, tk pd gA

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Mr. Gerard Pagès
CFO, Aliter, Group , Spain

An Interview with Mr. Gerard Pages, CFO during, North India Solar summit-2014

➲ Does India get enough sunlight for solar power to make sense?

India has abundant solar resources and increasing production capacity using this energy, the faster alternative displays and provides the optimal solution for the energy problems of India. India has much more radiation than other European countries that have installed thousands of MW using photovoltaics

➲ How does solar power connect to the electrical grid?

A photovoltaic installation connected to the grid, is an electric plant, injecting green kWh to the grid of electricity Distribution Company, for consumption where demand is. A photovoltaic installation connected to the grid, consists of the following elements:

• Metal frame support, Photovoltaic modules (PV Field), Protection Box, One or more inverters (DC/AC), Transformers, Energy meter etc.

➲ Does solar power make sense for an Industry if yes How?

In a scenario of rising prices, frequent power outages, costly diesel backup systems and falling prices of solar photovoltaics make this technology an attractive for the Industry

➲ How much area one needs to install a one MW solar plant?

You will need 4 acres for installing 1MW in a solar farm and in a roof top you will need 100 square feet for each kW you install

➲ Can solar panels be installed on factory roof tops too?

Sure!!! You have efficient use of space because you install these equipments in an existing and unused space. Involves cost reduction compared to installation on field and there is no energy loss due to transportation, because electricity is consumed where it is produced.

➲ What is net metering concept?

Net metering is a billing mechanism that credits solar energy system owners for the electricity they supply to the grid. For example, if a residential customer has a PV system on the home's rooftop, it may generate more electricity than the home uses during daylight hours. If the home is net-metered, the electricity meter will run backwards to provide a credit against what electricity is consumed at night or other periods where the home's electricity use exceeds the system's output. Customers are only billed for their "net" energy use.

Mr. Shailendra Salvi,
Managing Director
Vacon Drives & Controls Pvt Ltd

1.What is the main role of an inverter?

The electricity that flows from the utility grid is an alternating current. As the electricity that flows from solar modules is direct current, or DC current, the energy must be converted to alternating current to operate appliances. This is the primary function of the solar inverter to convert DC energy to AC energy. A solar inverterconverts the direct current (DC) output of a photovoltaic solar panels to an alternating current (AC) that can be fed into an electrical grid or can be used by a local off grid electrical network. An inverter is a critical component in a photovoltaic system.Solar inverters have special functions adapted for use with photovoltaic arrays, including maximum power point tracking and anti-islanding protection.

2.Why do you need a solar inverter?

The household appliances requires alternating current to work whereas solar panels give direct current. So, we need to convert DC current from solar panels to an alternating current to use. Solar inverters convert the electricity from solar panels (DC, or direct current) into AC power that can be used for captive consumption or export to grid

3.What are the different types of solar inverters?

The Solar inverters can be classified into three types:

Grid-tie inverters, matches phase with a utility-supplied sine wave. Grid-tie inverters shut down automatically upon loss of utility supply, for safety reasons. They do not provide backup power during utility outages.

Stand-alone inverters are used in isolated systems where the inverter draws its DC energy from batteries charged by photovoltaic arrays. Many stand-alone inverters also incorporate integral battery chargers to replenish the battery from an AC source, when available. These inverters do not interface in any way with the utility grid, and as such, do not require anti-islanding protection.

Battery backup inverters, are the inverters which are designed to draw energy from a battery, manage the battery charge via an onboard charger, and export excess energy to the utility grid. These inverters are capable of supplying AC energy to selected loads during a utility outage, and are required to have anti-islanding protection.

4.How to choose the right PV power Inverter?

The choice of an inverter depends upon whether your system is grid-tied or off-grid, and whether your system include batteries, either for off-grid use or on-grid with battery backup. Inverters are specific to each case:

Grid Tie Inverters :In such a case, the energy from the PV array is sent straight through the inverter to the AC loads or the utility grid. There are the most common inverters.

Off Grid Inverters :When there are batteries in a PV system, an entirely different type of inverter must be used. Off-grid (stand-alone) systems use batteries for energy storage.

Grid-tied systems with battery backup can send excess energy to the grid, but when the grid is unavailable, will still energize loads using energy stored in the batteries.

5.What is the difference between solar inverter and regular power inverter?

A power inverter is a device that converts Direct Current (or DC) to Alternating Current (or AC) using transformers, switching and control circuits. This is the basic function of any inverter: be it solar or regular inverter. A regular power inverter take the DC power from the batteries and convert it to AC power used by appliances. A solar inverter also does the same if it is an "Off Grid" solar power system. In case of "Grid Connected" the DC power is from the solar panels and AC power is given to the grid

6.Can we use the existing inverter as a solar inverter? How?

Integrating solar Photovoltaic with these existing home inverter system can provide relief to the households for additional charging option apart from normal grid charging of the storage batteries . A solar cum battery charge controller is to be connected with home inverter in to a solar which can charge the existing battery through the solar panels as well.

7.What is the difference between on gird inverter and off grid inverter?

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8.What is the life time of Inverter?

A good inverter can last for 15-20 years

9 . What are safety precautions to keep in mind?

- While wiring an inverter ,use only Standard and insulated Wires to avoid fire due to short circuit.
- Always keep inverter in a stable position.
- Check that the inverter is earthed properly.
- Carry out maintenance check of all your electrical equipments once every month.
- Ensure that the inverter fan runs always to keep it cool

Mr. Anuj Nigam
Director,Startling Solar

➲ Does solar only work on warm and sunny days?

Solar system works in both the conditions in sunny & cloudy days. In case of cloudy atmosphere the generation goes down but clouds don't stop the solar UV rays from getting through the atmosphere and power production from Photovoltaic solar panels actually works.

➲ How does solar help the environment?

It creates no emissions & thus reduces green house gases. Consequentially if more & more solar power is used, there will be fewer occurrences of flash flood & drought. Solar power helps the environment is because it uses no fossil fuels (which is a non-renewable resource) to make energy, which releases carbon dioxide and other harmful emissions.

➲ How does a solar energy system benefit one individually?

- It is free energy we need not to do anything.
- It causes savings in your Electricity bill
- It adds to the value of your home.
- You gain partial energy independence.
- It's a good investment in a sustainable future for yourself and your future generation

➲ How can solar improve national security?

It helps in communication if we are in the remote locations. Solar energy can help reduce dependency on import of oil & coal from abroad. This will also save our precious foreign exchange reserves. Thus all these factors together add to the national security of our country.

➲ How can solar help the economy?

One of the many benefits of solar power is that the industry has the potential to help boost the economy. A solar system is a long-term investment. Nationwide, average utility rates have been on the rise for the last 30 years. With the rising prices of coal & oil the usage of solar power will result in tremendous savings. In case of fossil fuels apart from the cost of generation there are associated costs like the slag disposal, carbon emissions etc.

➲ What regular maintenance do I need to do?

Yes – you have to clean your solar panels and you have to clean them regularly. The dust deposited on the solar panels reduces the performance, hence regular cleaning is required.

➲ How long will my system last?

The solar panels are supplied with a warranty of 25 years.

➲ What are the various applications of solar power?

Solar power is the most unique of all renewable sources of power. It can be used from a single watt to a thousand megawatt scale. We can have small uses like solar mobile charger, solar lanterns, solar street lights, solar home systems, customized solar kW solutions etc. The customized solar solutions are very much in demand by petrol pumps, ATM's, colleges, schools, banks especially in rural branches etc.

It has a very cost-effective application in agriculture especially in the form of solar pumps.

➲ How much price effective are solar solutions?

The solar solutions are quite price effective. The normal payback period of a solar system is about five to seven years when compared to supply of electricity from grid. But, when you compare wherein diesel is more used like in case of agricultural pumps etc, the payback becomes much faster.

FEEDBACK OF NISS-2014

"" Lot of potential in Uttar Pradesh. People showing good interest in Solar Energy. Get benefit as brand awareness of our Company".

Mr. Saurabh Jakhtete
Spark International, Mumbai

" Very Good Exhibiton". Plan and organize at a big level in near future"
Mr. Subash Yadav
UPNEDA, Lucknow.

Interaction with other Solar Market Players. Customer Interaction for Solar Product , enquiries and education, Recognition & interaction with Govt. Official visited during NISS-2014. More marketing and publicity needed.

Mr. Laxmi Shankar and Mr. Sujeet Sharma
OSO Sunpower Pvt. Ltd. Lucknow.

"Good Platform for our Solar Company"
Mr. Ashutosh Kr. Singh
Thrive Solar Energy Pvt. Ltd, Lucknow

"Opportunity to promote Foreign Industries (such as Solar Industry in Spain), High Networking, Acknowledgement of the Indian Solar Markets."
Mr. ALBA JURADO PEREE
Solartys, Barcelona.

"Footfall is average, Should increase the space of venue and more facilities for the exhibitors and participants."
Mr. Mukesh Kaushik
M/S Akshay Solar Power (India) Pvt. Ltd, Hyderabad.

"Nice, good event for Solar Energy Awareness for Industrialist. More publicity Indoor &Outdoor needed."

Mr. Abhishek Singh
Kirti Solar Ltd, Kolkatta

"Being the First year, it was a very good show, quality footfalls were in place. We need to plan at a bigger scale. We are ready to support in whatever way it is require."

Mr. Jay Kumar
RE-EN-GEN Solutions Pvt. Ltd., Pune

" It was a good exposure to participate in the exhibition. More advertisement and publicity needed to attract more visitiors."
Mr. Sanjay Jain
R.K.Engineers Solar ltd. Lucknow

ROOF TOP SOLAR SYSTEM IN INDUSTRIES

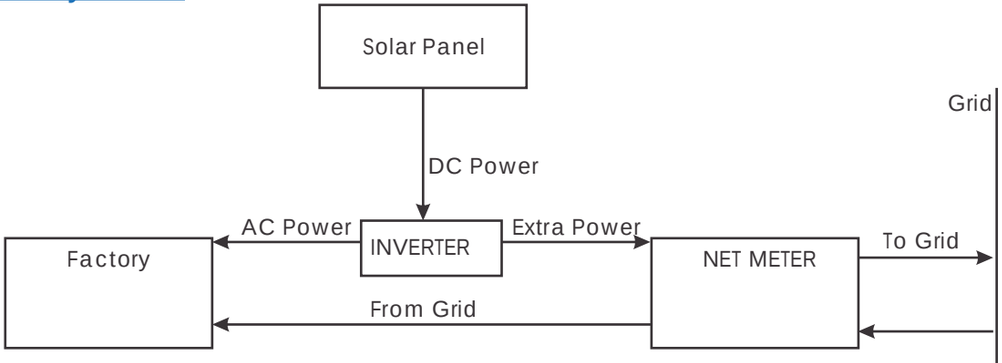
Contributed by Sri Jugal Kishor
Immediate Past President IIA

One of the main requirements for the Industry is continuous and reliable supply of Power. Today in UP, industries are facing severe problem due to unreliable power supply. There is a peak shortage of around 15% in UP and due to which there are continuous loads shedding and hence every Industrial unit has to arrange for the backup power in the form of diesel generators etc.

In such a scenario it comes to mind if Roof top solar can be used to tackle this shortage?

- Can Solar panels be installed on the top of roof of a factory and electricity produced from using them?
- Can this produced electricity be used directly for running the factory and can any extra power produced be sold back to the power company so that anyone else can use it?

The System:-



Above is the basic schematic diagram of the roof top solar system. The solar panel will be installed on the roof of the factory building. The solar panel will convert sunlight into electricity and this electricity will be inverted to AC power using inverter. This solar power will be used directly by the factory and any extra power required will come from the grid. However if there is more solar power generated then required at that time , that extra solar power will be given back to the grid through Net meter . The net meter will keep the tab of how much power we have given to grid and how much we have taken from the grid.

We will pay the net bill. Ie if we have consumed 1000 units of grid power and have given 500 units of solar power to the grid then we will pay for the net units ie 1000-500= 500 units.

Similarly if we have given 1000 units of solar power to the grid and have consumed ay 500 units of the grid power then it means we have given a Net power of 1000-500= 500 units to the grid and we get the payment for this amount from Electricity Company.

The issues:-

The system looks simple but there are many issues which will hamper its growth unless addresses and solved some are:-

1) Financing: The system is costly and requires huge upfront investment which restricts people opting for this system. There should be easy availability of loans for solar rooftop projects on EMI basis without collateral so that factory who installs the system now will pay EMI instead of electricity bill.
2) Interest: even if bank is ready to finance the project the present interest rates are so high that they make the project costly. The finance should be available on zero interest or very low interest rate of say 1-2 %. This could be achieved as we will be creating green renewable energy and interest rates could be offset by the so called carbon credits such generation will earn.
3) Replacement of old meters by NET meters.:- current meters don't have facility to record flow of current both sides hence the current meters need to be replaced by net meters and billing system will need to be changed accordingly.
4) Billing System: The billing system needs to be revised accordingly, the main issue of concern will be the fixed energy charges which are currently levied on consumer. If the customer is Net seller of electricity then will he still have to pay fixed charges? How will the electricity company pay to this net seller? This needs to be addressed. May be some electricity card can be given to the company which the company can sell in the market.
5) This system means that at a particular time there will be many small power suppliers to the Grid. We need to see if the grid is capable enough to handle this and control generation accordingly. Maybe the grid will need to be converted to Smart grid.
6) The cost of solar power and the grid power needs to be same to keep the system simple in implementation.

Ministry of New and Renewable Energy Govt. of India has scheme on Roof Top Photovoltaic (SPV) System. To know features and financial assistance regarding this policy please check the link.

http://mnre.gov.in/file-manager/UserFiles/rtpsvs_features.pdf

Support From Credit Advisory Center at IIA Head Office.

AM Mishra
Knowledge
Partner SIDBI

After completing MBA in Marketing Ms. Milan Tripathi couldn't get a campus selection. However she was not disappointed. With some efforts she joined an Educational institute but left it within 2 years. She wanted to do something different in her life. As she was in Lucknow, she explored the possibility of a hotel in Ashiana area. She has given thought to this idea and decided to open a restaurant to start with. She took a suitable place on lease. Needless to say that her parents & relative supported her with initial involvement.She approached few banks for financial support. However she could not get the desired support as there was no collateral security to offer.

She contacted our Credit Advisory Centre at IIA. Mr. A.M. Mishra the Knowledge Partner appointed by SIDBI who heads our Credit Advisory Centre contacted Ms. Milan Tripathi and assured her to advice for financial help.

Ms. Milan Tripathi was very happy when the Marketing Manager of Canara Bank contacted her and came for inspection of the place. With the assurance of financial support Ms. Milan Tripathi's confidence boosted. Her restaurant had a grand opening ceremony on 2nd MARCH 2014.

Credit Advisory Centre, IIA Bhawan, Lko
Email:- cac@iiaonline.in, mkb@iiaonline.in

Benefits of Solar

Why Go Solar?

The electricity generated by your solar power system is clean, renewable and reliable. It will help reduce the amount of greenhouse gases – a major contributor to global climate change. A growing solar industry provides local jobs and economic development opportunities for states and regions.

Why Is Solar Energy Important?

Solar energy systems convert the sun's rays into electricity or hot fluids; they produce no air pollution, hazardous waste, or noise. The more electricity and heat that we convert from the sun's rays decreases our reliance and dependence on fossil fuels and on imported sources of energy. Finally, solar energy can be an effective economic development driver.

Why are States Investing in Solar?

Many states have come to recognize that clean energy technologies can provide cleaner air, economic development and high tech jobs, fuel diversity, energy independence, improve power reliability, increase price stability, and reduce the need to build more expensive and more polluting electric power generation plants. Solar technologies are able to provide these benefits, but they currently cost more in terms of $ per kWh than conventional power from utilities. The biggest barrier to consumers interested in adopting PV or solar technologies is the initial cost of a PV or solar hot water system. As a way to help defray those upfront costs, states are providing incentives to residential, industrial and commercial customers of PV through tax credits, grants, loans, rebates, exemption from local property taxes, and other industry support mechanisms, such as installer training and certification programs.

What Can Solar Do for You?

Photovoltaic (PV) power systems convert sunlight directly into electricity. A residential PV power system enables a homeowner to generate some or all of their daily electrical energy demand on their own roof, exchanging daytime excess power for future energy needs (i.e. night time usage). The house remains connected to the electric utility at all times, so any power needed above what the solar system can produce is simply drawn from the electric utility. Solar energy technologies can plan an important role in providing an alternative source of electricity, energy, and back-up power for homes, offices, commercial and industrial buildings. It can relieve demand pressures for electricity off from the grid during peak usage, which usually correlates to peak daylight, especially in the warmer months when demand for air conditioning can sky rocket.

Solar energy can also play an important role in lowering greenhouse gas (GHG) emissions by replacing coal-powered energy sources with clean, renewable solar PV technologies. These GHG emissions reductions will in turn improve air quality and lessen the harmful impacts that contribute to climate change.

Those who are putting solar on their homes, businesses or other buildings are making a difference.

10 Main Benefits of solar energy.

1. Solar energy is not only sustainable, it is renewable and this means that we will never run out of it. It is about as natural a source of power as it is possible to generate. Not only are we able to refuel our vehicles with it we can heat our water and light our homes.

2. We can generate our own source of electricity via solar panels potentially enabling us to live off grid. In other words we need not be dependent on the public utility companies to supply our power and we also won't be required to pay for our power.

3. The creation of solar energy requires little maintenance. Once the solar panels or troughs have been installed and they are brought up to maximum efficiency there is little else to do to ensure they are in working order.

4. They are a silent producer of energy. There is absolutely no noise made from photovoltaic panels as they convert sunlight into usable electricity.

5. The creation of solar power is unobtrusive, particularly the solar electricity that is generated from photovoltaic panels that sit on top of the roofs of buildings.

6. Many governments around the world and locally offer generous rebates and monetary incentives to install solar panels and solar hot water systems. The governments of various nations understand the importance of the creation of electricity from renewable sources is to the entire world and are receptive to making it as attractive a proposition as possible for individuals.

7. If you produce enough solar electricity or if you don't use all of the electricity that you produce you can sell it back to the utility company for electricity credits. This is a rare occurrence for the most part, unless you are away on vacation for a week or two, in which case your solar panels will go on producing electricity that you won't be using.

8. Large solar energy facilities can produce electricity regardless of whether the sun is shining or not making them sustainable and reliable electricity producers. The solar power plants capable of achieving this feat are generally thermal solar power producers capable of storing the heat generated and using it when the sun is not shining.

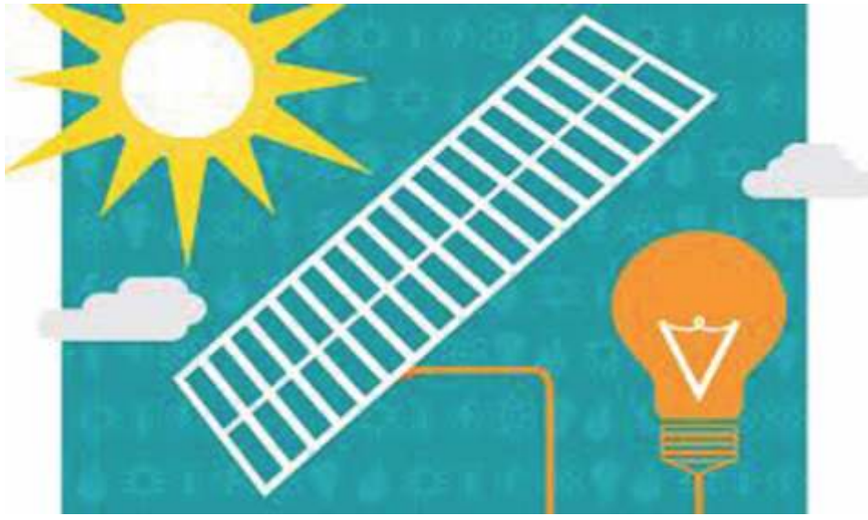
9. The advancements in technology used to create solar energy are continuing to improve making it even more cost effective. As it becomes cheaper to install new solar energy generators the price of solar electricity will continue to drop bringing it more into line with traditional, fossil-fuel generated electricity.

10. Solar electricity power plants and personal solar panels produce zero emissions and make no adverse mark on the environment.

The real benefit of using solar energy is its capability of being distributed among the community. As rooftop solar panels are becoming more widespread and more homes are installing them, the load on large coal-fired power plants is being reduced. Although a lot of money is being pumped into the creation of large-scale commercial solar power plants, it is the utilization of the space found on the roofs of our own homes that is going to make the biggest difference over the longer term.

Salient Features of Uttar Pradesh Solar Policy -2012

The Uttar Pradesh government has realized the importance of solar energy in the future energy. Uttar Pradesh Cabinet approved the first-ever solar energy policy of the state. Under this policy, a target of producing 500 mega watts (MW) of electricity through solar energy has been set by March 2017.



Objectives of the Policy:-

a) To promote generation and use of clean and green power in the State by harnessing solar Energy.
b) To put in place an appropriate investment climate which could stimulate private sector participation in development of solar power.
c) To spread environmental awareness among the general public.
d) To contribute to productive use of wastelands.
e) To enhance skills and create employment opportunities.
f) To promote establishment of Local manufacturing facilities.
g) To build capacity in the state to initiate and sustain, use and effective management of newer technologies.

Salient Features

- ✓ Grid connected solar Power projects will be implemented on suitable land banks identified and procured by the developer. In case of Projects to be set up on government land or space, selection of the developer will be done by the department or nodal agency through a transparent process.
- ✓ Minimum 5 MW capacity solar power projects will be covered under this policy.
- ✓ The energy generated from solar power projects that are commissioned during this policy period can be sold to distributions utility UPPCL or to third party or for Captive use.
- ✓ Sale of Energy to Local DISCOM:-
- Projects developers willing to sell their electricity to the distribution company of the state will compulsorily have to participate in the competitive bidding process for tariff determination, subject to approval from UPERC.

In case the bids are received for an aggregate capacity more than 200 MW, Selection of bidders shall be done on the basis of lowest quoted tariff in ascending order.

UPPCL will sign PPA with successful bidders for a period of 10 years

- ✓ Sale of Energy to Third Party:-

Solar Power Developers who want to set up projects under this policy and do not want to sign a PPA with distribution utility of UPPCL and want to sell power to a third party, can set up plants under this policy without a bidding process but will not be allowed to sign a PPA even at a future date with distribution utility of UPPCL. These plants, who want to avail the incentives as per the policy will have to register with the nodal agency, sign an agreement and furnish a performance bank guarantee till the commissioning of the project as per the time frame given in the Policy.

- ✓ Captive Power plants:-

Solar Power plants above 5MW capacity to be built for captive will also be eligible for the incentives under this policy either within the premises of the user plant or outside with wheeling arrangement.

- ✓ Incentives under Solar Policy:-

All the incentive provided under the Uttar Pradesh State Industrial Policy, 2012 will be applicable on the power plants based on Solar Energy.

- ✓ Solar Farms:-

Provision of special incentive will be made by the State Government on case to case basis for Solar Farms where many power plants based on solar energy are installed and the total investment is more than Rs 500 crores.

- ✓ Single Window Clearance system:-

Nodal Agency will act as single window clearance of Solar Power Projects. Nodal agency will ensure that all relevant government orders pertaining to this policy are issued in a time bound manner by concerned departments.

- ✓ Role of Nodal Agency: - The Nodal agency will facilitate and assist the project developers and undertake the following activities to achieve the objectives of the policy.

- Bidding of Projects- The nodal Agency will be responsible for carrying out all the tasks related to bidding process for Solar Power projects in the state.
- Land Bank- Identification of suitable locations and creations of land bank.
- Facilitation for government Land/Space- Facilitation for allotment of suitable land/space in control of State Government or its agencies.
- Assistance in Other Infrastructure- Assistance in arranging right of way, if any, water supply and connecting infrastructure like roads etc.
- Training- Develop appropriate manpower skills by tying up with training and educational institutions.
- Financial Arrangement- Utilization of funds provided under budgetary head "Incentive scheme for "Solar Power Generation" for activities like hiring of consultants for Bid Process management, Outsourcing of single window system and other incentives to be made available through this policy or on any other activity or works which are required for implementation of Solar Policy in the State.

To oversee, monitor and resolve various issues arising out of this policy, an empowered committee will be constituted under the Chairmanship of the Chief Secretary of the State.To know more details regarding this policy please check the link: -
http://www.iiaonline.in/doc_files/Solar_Power_Policy_UP_2013.pdf

Frequently Asked Questions

What is the Process for installing Solar power?

- The overall process for installing Solar power includes the following steps:
- First decide whether solar power is financially suitable for you.
- Check with your electricity retailer about whether you are eligible for a feed in tariff for the excess electricity you export back to the grid. If you are satisfied with the retailer's feed in tariff offer and the associated terms and conditions, ask them about signing up for it. You will not automatically start receiving a feed in tariff simply because you have installed a system.
- Check with your retailer whether you ar likely to need a new meter and about any changes to your electricity consumption tariff structure and rate.
- Choose a reputable solar supplier- the company that will sell you a solar PV System and install it for you.
- The Solar Power system is then installed by the solar power supplier. A copy should go to the electricity distributor.
- Your electricity meter needs to be changed by your distributor to be measure the excess solar power you sell to your retailer.
- Advise your retailer that you have solar power and apply for a feed in tariff.

The Actual installation of the Solar Panels and associated equipment involves:-

- Installing mounting frames on your roof
- Attaching the solar panels to the mounting frames
- Installing the inverter, usually on an external wall near the fuse box.
- Running electricity cables from the solar panels to the inerter.
- Installing new safety switches in your fuse box for the solar power system.
- Connecting the inverter to the fuse box
- Placing stickers to notify electricians and emergency services of the presence of your Solar Power System.

How much land is required to setup a 1MW solar power generation Unit?

The land required for a 1 MW power plant setup is around 4.5-5 acres for crystalline technology and around 6.5-7.5 acres for Thin-Film technology. This is only a rough benchmark and may vary based on technology and efficiency of panels.

What is the life-time of a typical Solar Power plant?

The useful life of a typical Solar Power plant is considered to be 25 years. This is the duration for which long-term PPAs are signed and financial models are built. However, Solar Power plants can run beyond 25 years while producing a lower output. Many Solar Panel manufacturers guarantee an output of 90% at the end of 10 years and 80% at the end of 25 years.

What is the annual energy generated from a 1 MW Solar Power plant?

The usual benchmark for energy generated from a 1 MW Solar Power plant is considered as 1.5 Million units. This is only a benchmark and should not be considered as the actual output for a given location. The amount of actual energy generated from a Solar Power Plant in an year depends on both internal and external factors. External factors which are beyond the control of a Solar developer can include the following:

- Number of sunny days
- Solar Irradiation
- Day Temperatures
- Air Mass

The output also depends on the following internal factors all of which are within the control of a Solar Developer:

- Plant Location
- Usage of Solar Tracking systems
- Quality of equipment used
- Workmanship of the EPC contractor
- O&M activities

What are the various modes under which we can setup a Solar Power plant?

The various modes under which a Solar Power plant can be setup depend on the specific requirement. All the following are valid modes and the costs for each kind of system varies based on various factors:

- Off-Grid Captive Consumption for domestic premises
- Off-Grid Captive Consumption for commercial premises
- Grid Connected (Net Metered) Captive Consumption for domestic premises
- Grid Connected (Net Metered) Captive Consumption for commercial premises
- Sale of Power generated to local Distribution Company (DISCOM)
- Sale of Power generated to 3rd Party consumer (Industry or Commercial entity)

What is the cost of setting up a Rooftop Solar Power plant for domestic or commercial use?

Rooftop Solar Power plants can be broadly categorized into Battery-based and Non-Battery based systems. The benchmark cost set by MNRE for the year 2013-14 for these systems are Rs.90-100 per W for Non-Battery based systems and Rs.170-210 per W for Battery-based systems. More details can be accessed on the following MNRE webpage : http://mnre.gov.in/file-manager/UserFiles/amendmends-benchmarkcost-aa-jnnsm-2013-14.pdf

What size Solar Power plant is required for domestic or commercial use?

Identifying the Solar Power plant size for your domestic or commercial premises depends on the following factors:

- Wattage of appliances to be run on Solar
- Monthly energy consumption from these appliances
- Energy Backup or Days of Autonomy required
- Roof space available for plant setup
- Based on these factors, the power plant sizing can be accordingly done at your end.

Permissions and Bank Loans

What permissions/clearances are required to setup a Solar PV Plant?

A certain set of permissions need to be obtained and documents need to be submitted in order to setup a Solar PV plant. While these may vary from state-to-state, in order to get a Solar PV Project the following are the statutory clearances and environmental clearances to be furnished:

1. Industrial Clearance
2. Land conversion (Agricultural to Non-Agricultural)
3. Environmental Clearance Certificate
4. Contract labour license from Labour Department
5. Fire Safety certificate from Fire Department
6. Latest tax receipt from the Municipal/Gram Panchayat for the factory land.
7. Auditor compliance certificate regarding fossil fuel utilization
8. Approval from Chief Electrical Inspector
9. Clearance from Forest department

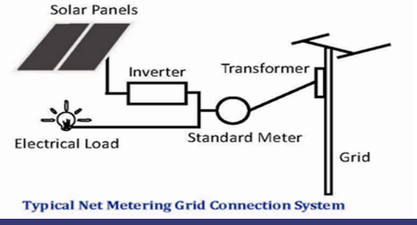
Also, all necessary approvals/ agreements before start of Solar PV project construction are to be furnished as and when necessary. These include the following:

10. Land purchase
11. Power Evacuation arrangement permission letter from DISCOM
12. Confirmation of Metering Arrangement and location
13. ABT meter type, Manufacture, Model, Serial No. details for Energy Metering.
14. Copy of PPA (important as Preferential PPA projects are not eligible for REC mechanism)
15. Proposed Model and make of plant equipment
16. Undertaking for compliance with the usage of fossil fuel criteria as specified by MNRE
17. Details of Connectivity with DISCOM
18. Connectivity Diagram and Single Line Diagram of Plant
19. Details of pending court cases
20. Any other documents requested

These are typically the clearances/documents required in general for a Solar PV project.

What is Net metering?

Net metering measures the difference between what your solar power system producing and what you are consuming. Under the net metering the excess energy generated by the Solar Photovoltaic Plant at the given point of time is exported to the grid instead of being stored using a battery. However when there is deficit in the power generated by the Solar Panels either during a cloudy day or night energy is drawn from the grid. At the end of the billing period, If more energy exported to the grid than imported then the distribution licensee pays the consumer at a pre-determined price. However on the other hand if more energy is imported from the grid than exported, then the consumer pays the distribution licensee at a predetermined price. These prices usually vary from State to State.



Typical Net Metering Grid Connection System