

# **SOLAR POWER POLICY FRAMEWORK FOR THE STATE OF TELANGANA**



## GLOSSARY

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COD	Commercial Operations Date
CII	Confederation of Indian Industry
GoTS	Government of the State of Telangana
Gol	Government of India
MNRE	Ministry of New and Renewable Energy
MoP	Ministry of Power
NCE	Non-Conventional Energy
NOC	No-Objection Certificate
NSM	National Solar Mission
PCB	Pollution Control Board
PPA	Power Purchase Agreement
PV	Photo Voltaic
R&D	Research & Development
REC	Renewable Energy Certificate
RPPO	Renewable Power Purchase Obligation
RLDC	Regional Load Dispatch Centre
SGST	State Goods Service Tax
SLDC	State Load Dispatch Centre
SPC	Solar Policy Cell
SPP	Solar Power Project
SPV	Special Purpose Vehicle
SRP	Solar Roof-top Project
Scheduled Consumers	As defined in Regulation 2 of 2006
TNREDCL	Telangana New and Renewable Energy Development Corporation Limited
TSDISCOMS/DISCOMS	Distribution Companies of the State of Telangana
TSPCB Telangana	State Pollution Control Board
TSNPDCL Telangana	State Northern Power Distribution Company Limited
TSSPDCL Telangana	State Southern Power Distribution Company Limited
TSTRANSCO Telangana	State Transmission Corporation
TSERC Telangana State	Electricity Regulatory Commission

GLOSSARY



## PREAMBLE

In the last decade, due to increasing thrust of Governments across the world towards fuel conservation and clean energy, solar power capacity has increased by over 45 times and stands at about 184 GW in 2014. In India, capacity additions in solar power have been even more remarkable. In contrast to mere 10 MW in 2010, total solar capacity in India has grown to nearly 3000 MW in 2015.

Growth rate in solar capacity has been accompanied by rapidly declining cost curves. Solar system costs have come down by nearly 70% in the past five years owing to technological advancements resulting in lower manufacturing and processing costs. In India, solar power prices discovered through competitive bidding have come down by more than 50% in the last four years.

Across the globe, about 7,200 gigawatts (GW) of capacity needs to be built to keep pace with increasing electricity demand while also replacing existing power plants due to retire by 2040. The strong growth of renewables in many countries raises their share in global power generation to one-third by 2040.

Government of India (GoI) has set for itself an ambitious target of increasing solar capacity to 100 GW by 2022 and 200 GW by 2050. In order to achieve these targets, GoI is implementing a wide range of regulatory and policy interventions. It is estimated that utility-scale grid parity is expected to be achieved faster than originally estimated and solar power will start aggressively competing with conventional power by 2017

Telangana has a vast solar potential with average solar insolation of nearly 5.5 kWh/m<sup>2</sup> for more 300 sunshine days. Government of the State of Telangana (GoTS), intends to make use of the positive environment in solar market and push given by GoI for substantially harnessing the solar potential in the State of Telangana.

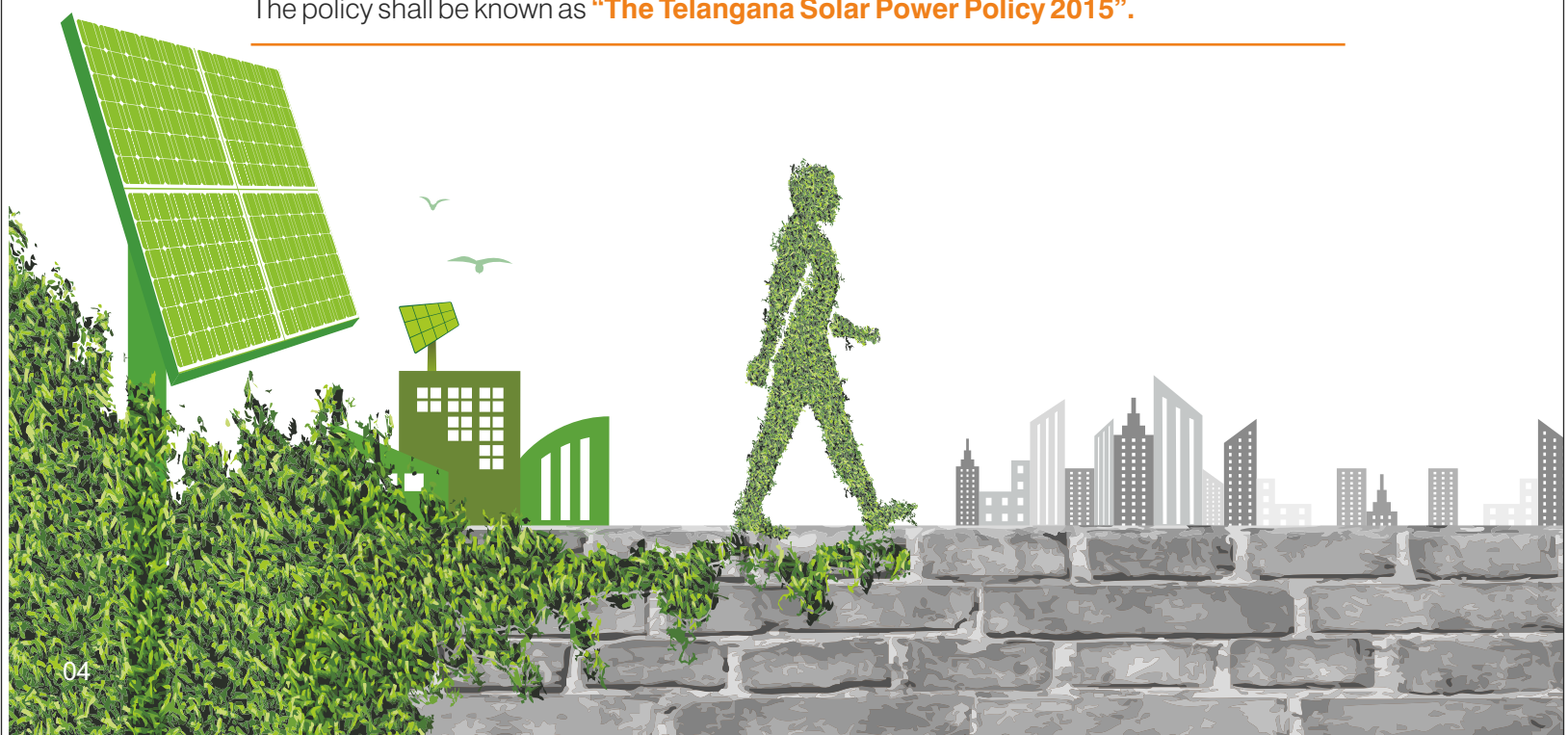
This policy of GoTS on solar has provisions which aims at creating an enabling environment for prospective solar power developers to harness substantial quantum of solar power in the best possible manner. This in turn is expected to meet the objective of GoTS to provide competitive, reliable power supply to its consumers and also to ensure a sustainable fuel mix in the long run.

## TITLE

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The policy shall be known as **“The Telangana Solar Power Policy 2015”**.

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**This Solar Policy has the following specific objectives:**

- \* Realize and harness the vast solar power potential of the state.
- \* Contribute to long-term energy security of the state and promote a sustainable fuel mix in generation through higher contribution of solar energy.
- \* To promote solar parks.
- \* To promote public as well as private investment in solar power generation.
- \* To promote decentralized and distributed generation.
- \* To promote grid-connected and off-grid solar applications and effective energy conservation measures.
- \* To promote all technologies of harnessing solar energy.

## OPERATIVE PERIOD

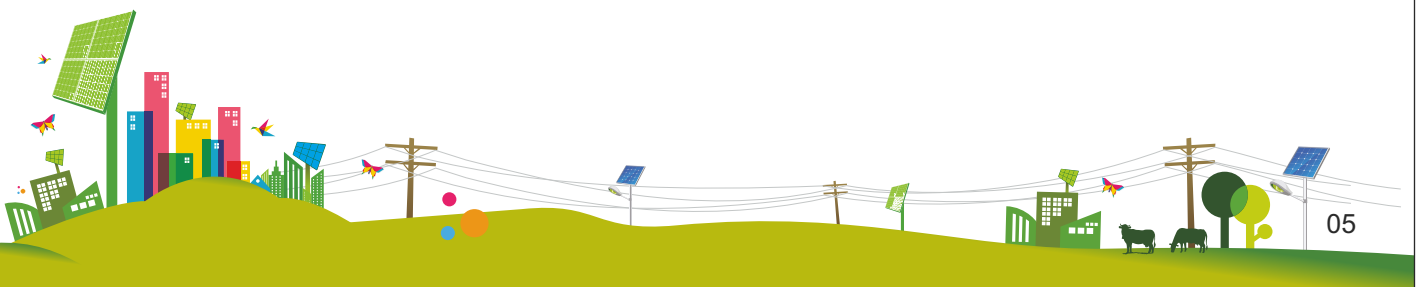
This policy shall come into operation with effect from the date of issue and shall remain applicable for a period of five (5) years. All Solar Projects that are commissioned during the operative period shall be eligible for the incentives declared under this policy, for a period of ten (10) years from the date of commissioning - unless otherwise the period is specifically mentioned.

## APPLICABILITY OF THE POLICY

This solar policy shall be applicable for the following solar projects set up within the state-

- 1) Solar Power Projects (SPPs)
  - a) Grid connected solar power projects based on both Photo Voltaic (PV) as well as Solar Thermal technologies
    - ◆ Projects set up for sale of power to TSDISCOMS
    - ◆ Projects set up for sale of power to third parties within the state
  - b) Projects set-up for captive generation/group captive generation (including those funded and owned by the developers)
- 2) Solar Roof-top Projects (SRPs) ( Grid-connected and off-grid ) – This includes projects which are funded and owned by developers
- 3) Off-grid applications
- 4) Any other project which is established based on MNRE/GOI Schemes as amended from time to time.
- 5) Solar Parks

OBJECTIVES



For availing benefits under this policy, power generated from any of the above modes, has to be consumed within the state.

Demand-side management through energy conservation is integral to energy security. Hence, this policy aims not only at promoting grid connected projects but also promoting off-grid solar projects/applications.

## REGULATORY FRAMEWORK

The Electricity Act 2003, as amended from time to time, mandates the State Electricity Regulatory Commission, to set tariffs for renewable energy as well as to issue regulations pertaining to renewable power purchase obligation (RPPO), and set charges for wheeling, transmission and distribution of electricity.



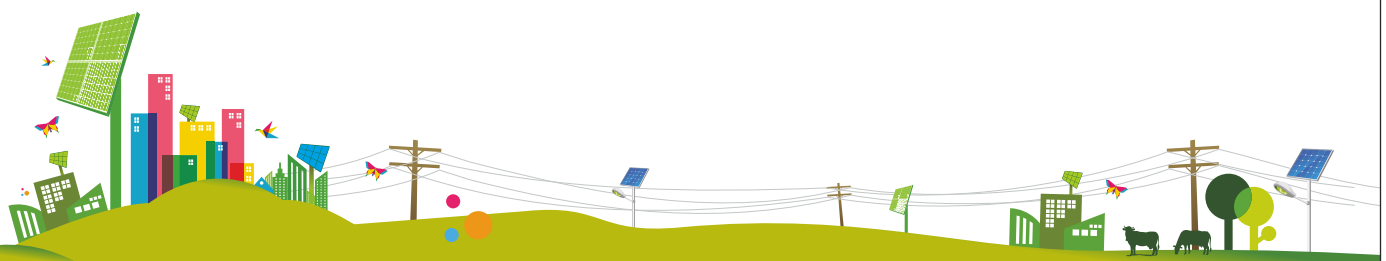
## SOLAR PARKS

The Solar Park is a concentrated zone of development of solar power projects, which provides developers an area that is well characterized, properly infra-structured, and where the risk of the projects can be minimized as well as the facilitation of the permitting process.

Solar Park implementing agency would be formed by State Government along with designated central agency and private sector participation or independently by private sector.

The Solar Park implementing agency will help facilitate in development of supporting infrastructure and facilities including power evacuation, water arrangements, internal roads and administrative facilities.

These Solar Park(s) will host an array of players in the solar power sector including solar power plants, component manufacturers, R&D centres, training centres, and financial institutions. The State of Telangana will extend all facilities and fiscal incentives provided by Central Government/ National Solar Mission to the manufacturers and other participants in Solar Parks.



## SOLAR ROOF-TOP PROJECTS

The Government of Telangana is committed to promotion of solar roof-top systems on public buildings, domestic, commercial and industrial establishments.

All incentives provided by the GOI/MNRE under the NSM or other schemes and incentives provided by state government from time to time shall be extended to grid connected SRPs as well as off grid SRPs.

The following additional support shall be available to grid connected SRPs as per the capacity limit as defined by MNRE from time to time.

The consumers are free to choose either net or gross meter option for sale of power to the DISCOMs under this policy. The tariff applicable for units generated under gross metering at 11 KV and below would be average cost of service of the DISCOM as determined by TSERC. The tariff applicable for units under net metering would be average pooled power purchase cost. Projects under both gross and net metering would be subject to monthly billing and settlement.

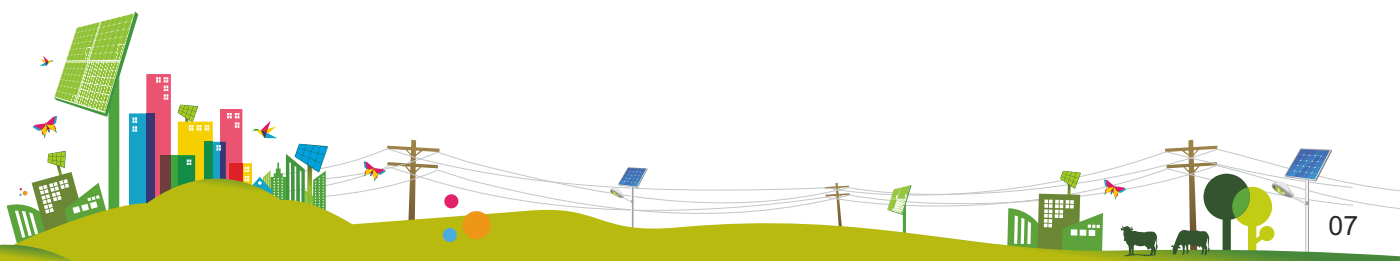
No distribution losses/charges shall be applicable for SRPs.

Consumer installing grid connected SRPs shall apply online with the respective TSDISCOM either on website/through designated customer service centres. All applications shall be processed and feasibility issued by the respective DISCOM. Such applications will be processed within 21 days from the date of application failing which it will be deemed to have been approved.

**The consumers are free to choose either net or gross meter option for sale of power to the DISCOMs under this policy. The tariff applicable for units generated under gross metering at 11 KV and below would be average cost of service of the DISCOM as determined by TSERC.**



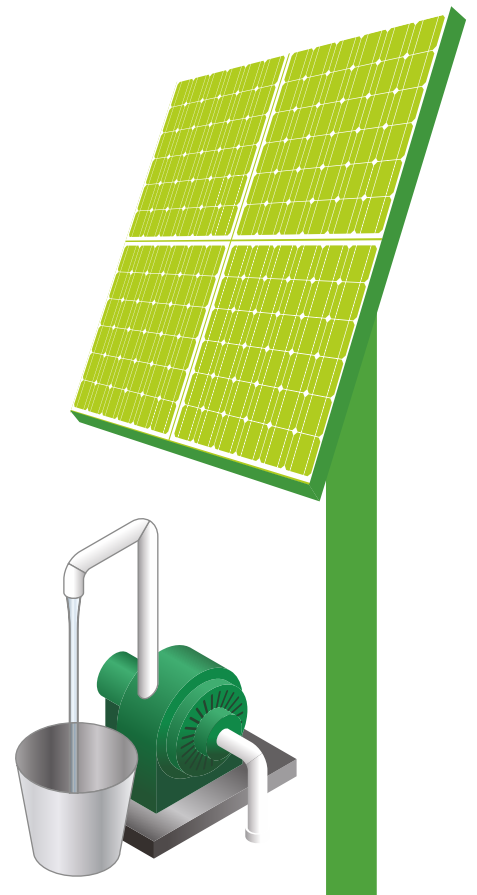
The above facility of gross and net metering would be extended to SRPs for a period of 25 years. The project size at a single location would be subject to technical constraints. The modalities of implementing the above policy directives for SRPs, including metering, billing, settlement, payment(s) and technical aspects etc. would be made available on the TSSPDCL /TSNPDCL website.





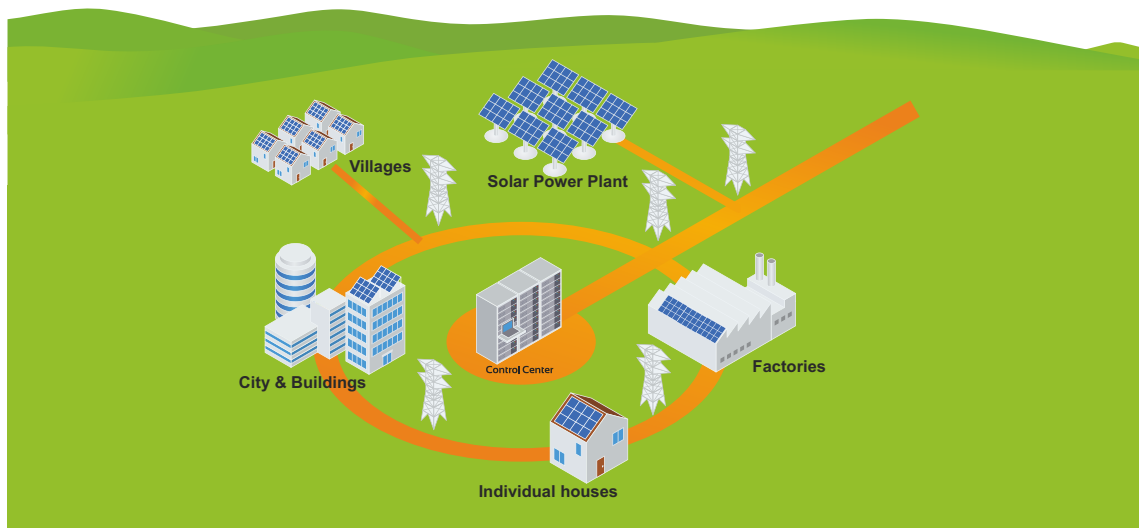
## SOLAR PUMP SETS

The State Government in collaboration with the Central Govt/MNRE/MOP/Multilateral agencies will undertake measures to enable gradual replacement of conventional pumpsets to solar powered pumpsets through subsidy support. The Nodal Agency will engage with various stakeholders for materializing subsidies, grants and/ or incentives on behalf of TSDISCOMS. The scheme of gross metering facility would be extended to project developers/ farmers for setting up solar powered pumpsets in the State. The modalities for implementing the solar powered pumpset program including commercial framework and technical aspects shall be issued by DISCOM within 30 days from the date of issue of this policy.



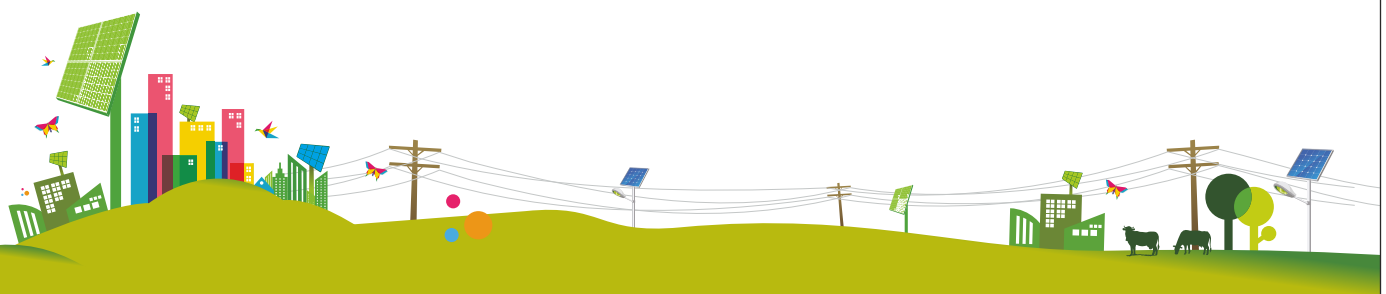
## SOLAR OFF-GRID APPLICATIONS

The State Government and the DISCOMS, through various awareness programs, shall actively encourage use of solar powered applications for both domestic, industrial as well as commercial purposes. The Nodal Agency shall work with DISCOMS to create an enabling framework with direct/indirect benefits for replacement of conventional applications with solar powered applications.



## EASE OF BUSINESS – ENABLING PROVISIONS

The State, in order to encourage solar based generation, has prepared the following measures for improving the ease of doing business. However the project developer has to ensure that the generation is within the time limit stipulated in the PPA or within a maximum period of 2 years from the date of application whichever is earlier, failing which the provisions



under this policy automatically stands cancelled. The following provisions are for Solar Power Projects (SPP) and Solar Parks, wherever applicable

a) **Facilitation of expeditious approvals through single window clearance**

The Solar Policy Cell (SPC) will undertake single window clearance for all SPPs. A transaction charge of Rs.10,000/MW shall be applicable for processing applications for single window clearance with a maximum of rupees two lakhs per project. The modalities of the single window clearance mechanism shall be notified within 30 days from the date of issue of this policy.

b) **Deemed conversion to Non-agricultural land status**

It is the responsibility of the project developer to acquire land for solar project. Land acquired for grid-connected SPPs for sale to DISCOMs/ captive use/ third party sale or for Solar Parks shall be deemed to be converted to Non-agricultural land status on payment of applicable conversion charges to the SPC and no further conversion procedures need to be followed by the developers in respect of such land. The conversion charges would be as per the Agricultural Land (Conversion for Non-agricultural Purposes) Act, 3 of 2006 amended from time to time.

c) **Exemption from Land Ceiling Act**

The ceiling limit as per the land ceiling act will not be applicable for any land acquisition for Solar Power Projects and Solar Parks. However, this exemption is available only against firm orders/ PPAs/ successful bids to the extent of land required. Land requirement would be computed at rate of 5 acres/ MW or any lower limit based on the advancement of technology.

d) **Transmission and Distribution charges for wheeling of power**

The wheeling and transmission charges are exempted for captive use within the state. They will be charged as applicable for third party sale. The transmission and distribution losses however is fully applicable for both third party within the State as well as captive use within the State.

e) **Power Scheduling and Energy Banking**

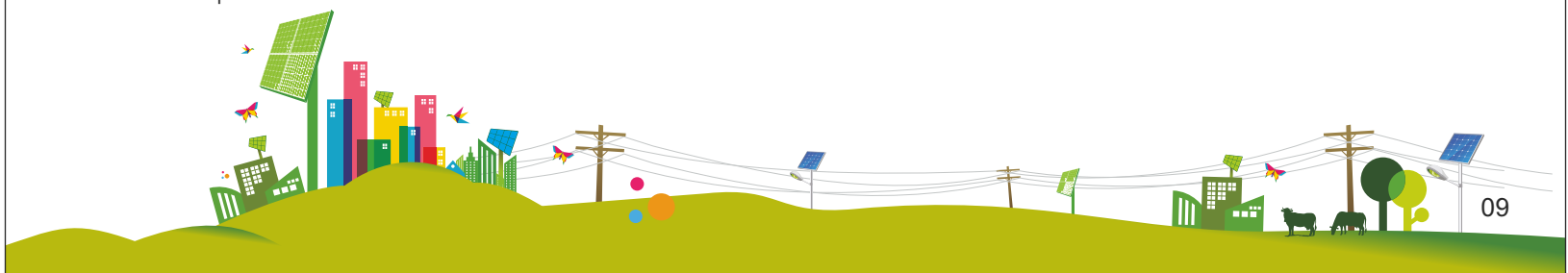
All SPPs shall be awarded must-run status that is injection from solar power projects shall be considered as deemed to be scheduled.

Banking of 100% of energy shall be permitted for all Captive and Open Access/ Scheduled

consumers during all 12 months of the year. Banking charges shall be adjusted in kind @ 2% of the energy delivered at the point of drawl.

The banking year shall be from April to March. Banked units cannot be consumed/ redeemed in the peak months (Feb to June) and in the peak hours (6 pm to 10 pm). The provisions on banking pertaining to drawal restrictions shall be reviewed based on the power supply position of the State.

**The Solar Policy Cell (SPC) will undertake single window clearance for all SPPs. A transaction charge of Rs. 10,000/MW shall be applicable for processing applications for single window clearance with a maximum of rupees two lakhs per project.**





For captive/ third party sale, energy injected into the grid from date of synchronization to open access approval date will be considered as deemed energy banked.

The unutilized banked energy shall be considered as deemed purchase by DISCOM(s) at average pooled power purchase cost as determined by TSERC for the year.

For Sale to DISCOMS, Energy injected into the grid from date of synchronization to Commercial Operation Date (COD) will be purchased by the DISCOMS at the first year tariff of the project, as per the provisions of the PPA with DISCOMS.

f) **Electricity Duty**

Electricity duty shall be exempted for captive consumption, sale to DISCOMS and third party sale in respect of all SPPs set up within the state. Also, Electricity duty will be waived for the new manufacturing facilities and ancillaries of the Solar Power Projects.

g) **Cross Subsidy Surcharge**

For SPP located within the state and selling power to third parties within the state, 100 % exemption shall be provided on the cross subsidy surcharge as determined by TSERC for five years from the date of commissioning of the SPP.

h) **Bill Settlement**

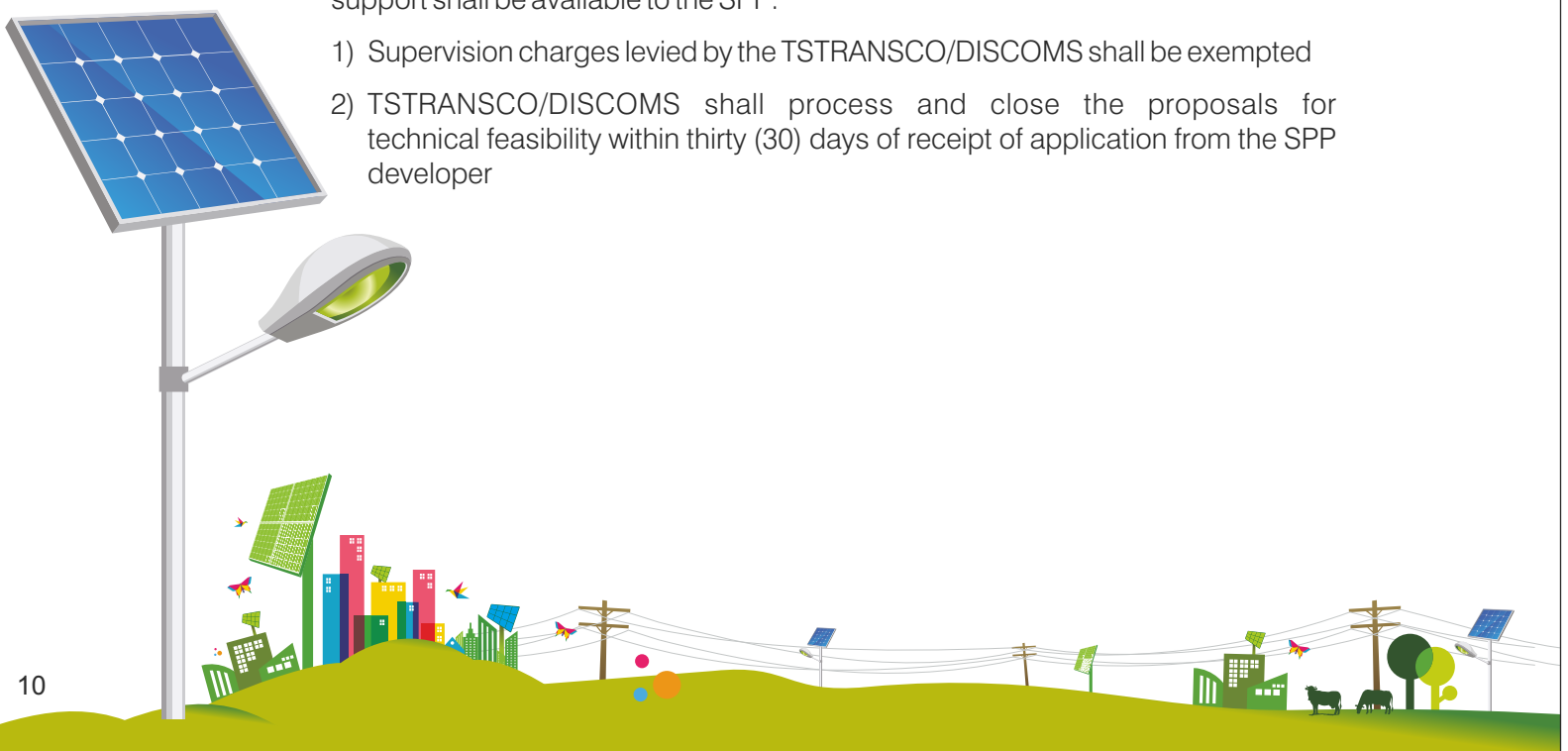
In respect of SPPs selling power to the DISCOMS, settlement of energy shall be as per the PPA executed between the SPP and the DISCOM.

i) **Grid Connectivity and Evacuation facility**

SPPs shall be evacuated at the appropriate voltage level at the interconnection point of TSTRANSCO or TSDISCOMS and evacuation up to the interconnection point shall be the sole responsibility of the SPP developer. The SPP shall conform to the order, rules, regulations and guidelines issued by the TSERC/SLDC/RLDC/ TSTRANSCO from time to time on all matters pertaining to operation and maintenance of the plant. The SPP developer shall bear the entire cost of transmission infrastructure till the interconnection point, however the following support shall be available to the SPP:

- 1) Supervision charges levied by the TSTRANSCO/DISCOMS shall be exempted
- 2) TSTRANSCO/DISCOMS shall process and close the proposals for technical feasibility within thirty (30) days of receipt of application from the SPP developer

**In respect of SPPs selling power to the DISCOMS, settlement of energy shall be as per the PPA executed between the SPP and the DISCOM**



j) **Payment of Development Charges and permission from Gram Panchayat**

Development charges and layout fee of INR 25,000 per acre basis shall be levied payable to the respective Panchayat. The land in fraction would be rounded to the next integer for calculating the development charges. On payment of such amount, Gram Panchayat will accord necessary approvals for setting up of the solar power project/ solar parks including permission for bore-wells. No further permission is required at the Panchayat. For this purpose, a separate category will be created under the Panchayat rules. Gram Panchayat will give permission within 14 working days from the date of making payment of development charges failing which permission will be deemed to have been accorded.

**100% refund of VAT/SGST for all the inputs required for Solar Power Projects will be provided by the Commercial Tax Department for a period of 5 years.**

k) **Refund of VAT**

100% refund of VAT/SGST for all the inputs required for Solar Power Projects will be provided by the Commercial Tax Department for a period of 5 years.

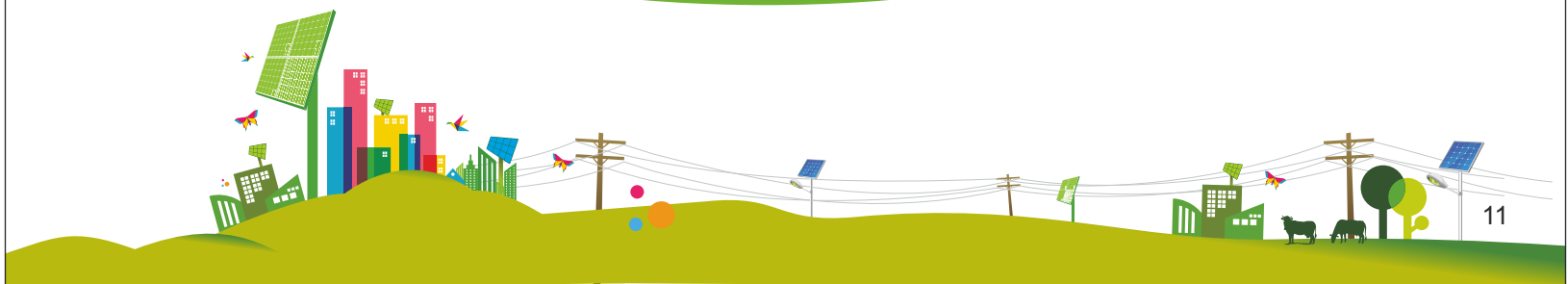
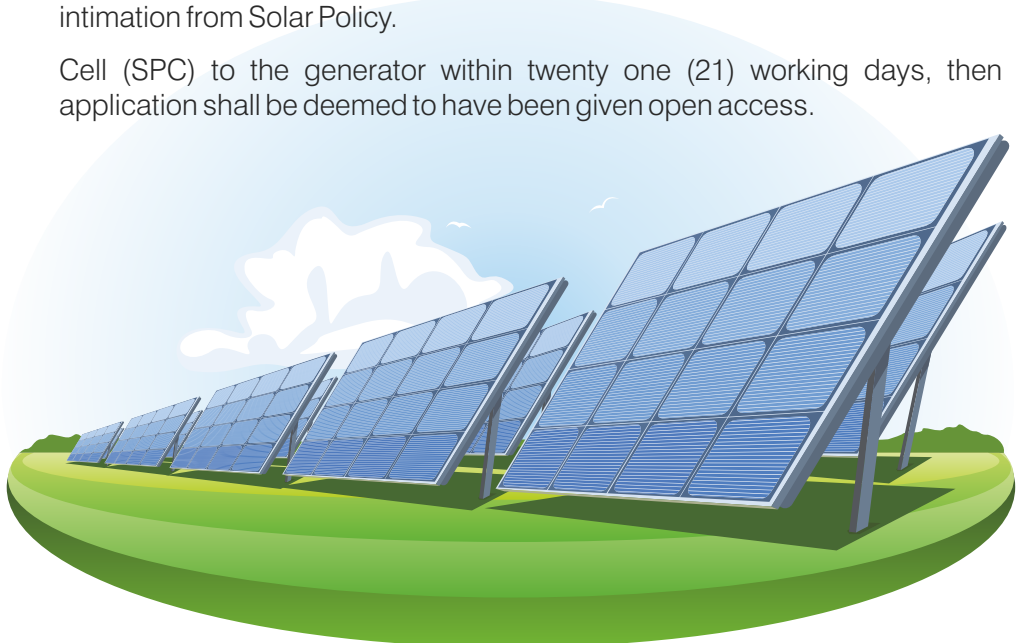
l) **Refund of Stamp Duty**

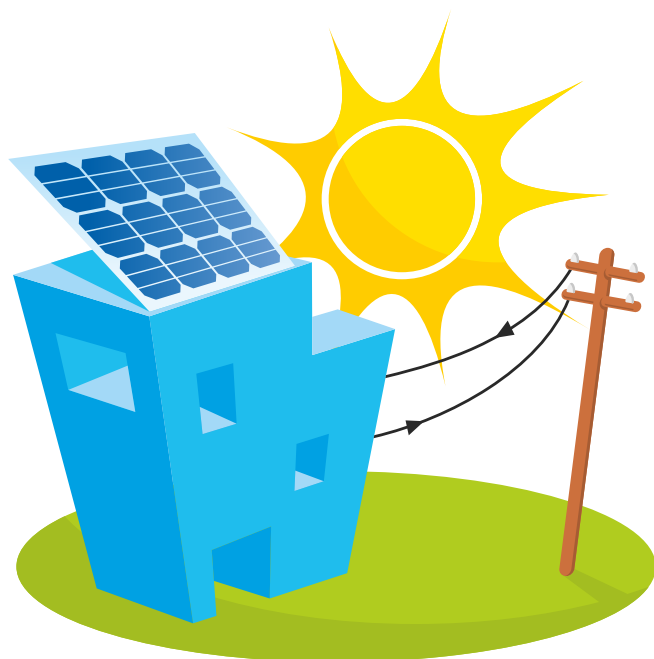
Industries Department will provide incentive in terms of 100% refund of Stamp Duty for land purchased for setting up Solar Power Project and/or Solar Parks. Registration charges are payable as per rules.

m) **Open Access**

Intra-state Open Access clearance for the tenure of the project will be granted as per TSERC regulations amended from time to time. In absence of any response or intimation from Solar Policy.

Cell (SPC) to the generator within twenty one (21) working days, then such application shall be deemed to have been given open access.





#### n) PCB clearances

SPPs using PV or solar thermal technology, being a part of green energy will be given required clearances under pollution control laws within a week by the TSPCB.

#### o) Provisions under the Factories act

The grid-connected SPPs setup for sale to DISCOMs/ captive use/ third party sale will be registered as factories (for the purpose of labour) under the factories act and the entire process shall be completed within a week.

### NODAL AGENCY

The Nodal agency shall be responsible for availing subsidy for solar roof-top systems, solar pumpsets, as per MNRE guidelines and shall co-ordinate with MNRE/Solar Policy Cell (SPC) of Discom.

### SOLAR POLICY CELL

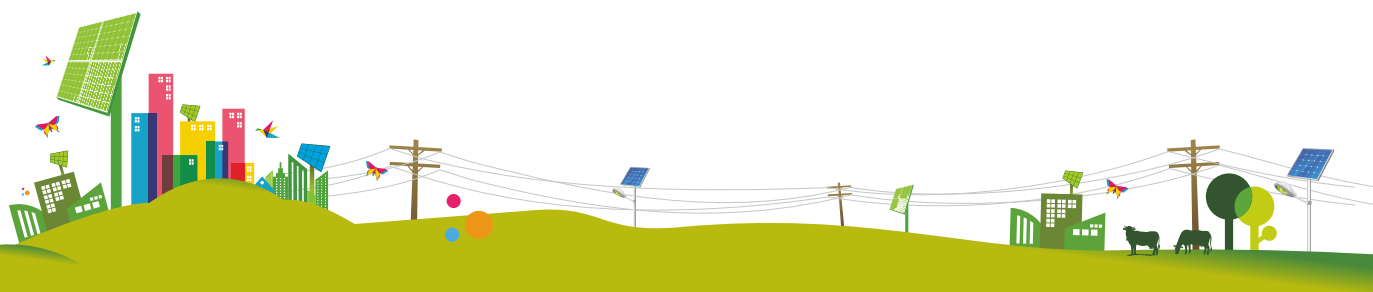
A dedicated Solar Policy Cell (SPC) shall be set up by TSDISCOMS under this policy for single window clearance of the Solar Power Projects (SPP). The responsibilities include the following:

- a) All clearances and approvals pertaining to DISCOMS and TSTRANSCO
- b) Obtaining power evacuation approval and/or Open Access
- c) Other clearances and approvals such as Panchayat/ Municipality clearances, agricultural land conversion

### PROJECT MONITORING COMMITTEE

A “High Level Committee” constituted with the following members will monitor the progress of implementation of the Solar Power Projects cleared under the policy:

1. Secretary, Energy Department
2. Chairman and Managing Director, TSTRANSCO



3. CMD of TSSPDCL
4. CMD of TSNPDCL
5. VC& MD, TNREDCL / Director(Commercial)TSSPDCL ( Member-Convener)
6. Representative of FAPTCCI/CII/FICCI (maximum of two members on rotating basis)
7. Representatives of Solar Power Developers (2 members)

## REVIEW

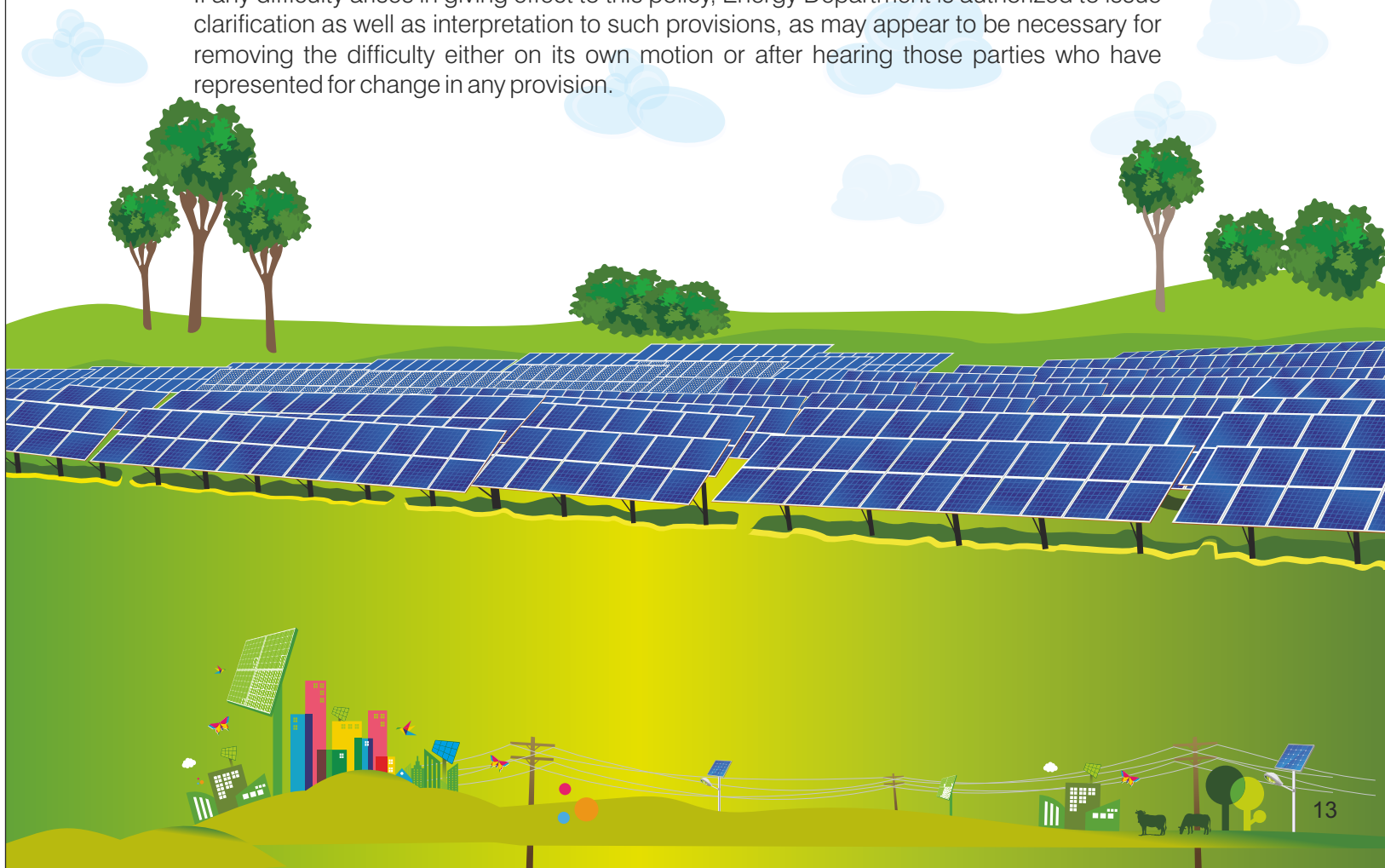
State Govt. reserves the right to review as and when need arises in view of any technological breakthrough or to remove any inconsistency with Electricity Act 2003, as amended from time to time, rules and regulations made thereunder or any related policy of Govt. of India.

## SAVING CLAUSE

State Government has the discretion and reserves its right to make changes in the policy. However, the incentives and exemptions provided under the policy for the projects commissioned before effecting of the change, shall remain as it is, for the operative period of the policy.

## POWER TO REMOVE DIFFICULTIES

If any difficulty arises in giving effect to this policy, Energy Department is authorized to issue clarification as well as interpretation to such provisions, as may appear to be necessary for removing the difficulty either on its own motion or after hearing those parties who have represented for change in any provision.



REVIEW



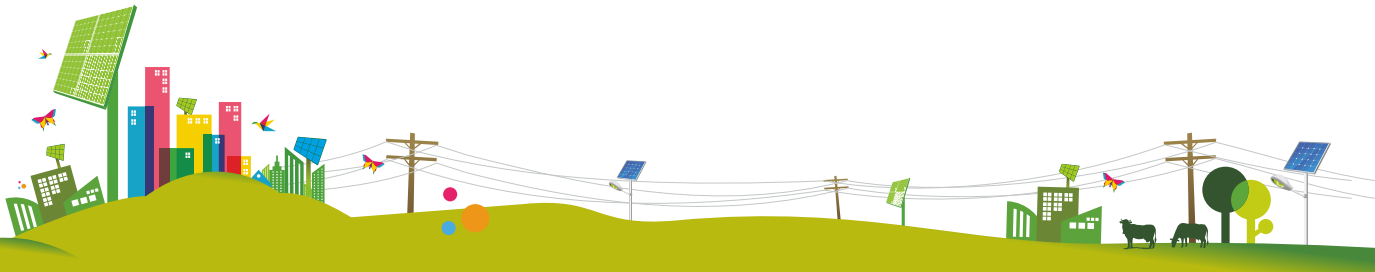
# SOLAR POWER INSTALLATIONS IN THE STATE OF TELANGANA



1st Solar Roof Top Project Synchronized with the Grid at Jubilee Hills, Hyderabad

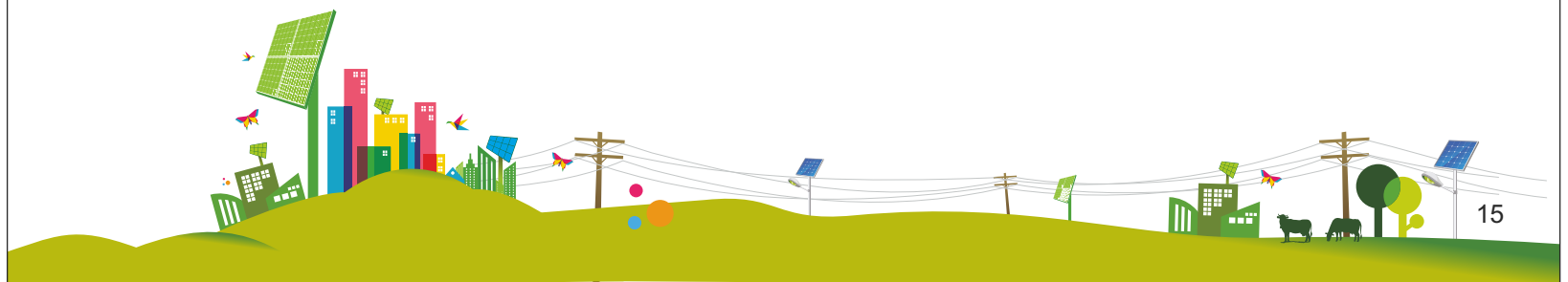


60 MW Solar Power Plant at Zaheerabad, Medak District





10 MW Solar Power Plant at Midjil Village, Mahbubnagar District





# NOTES

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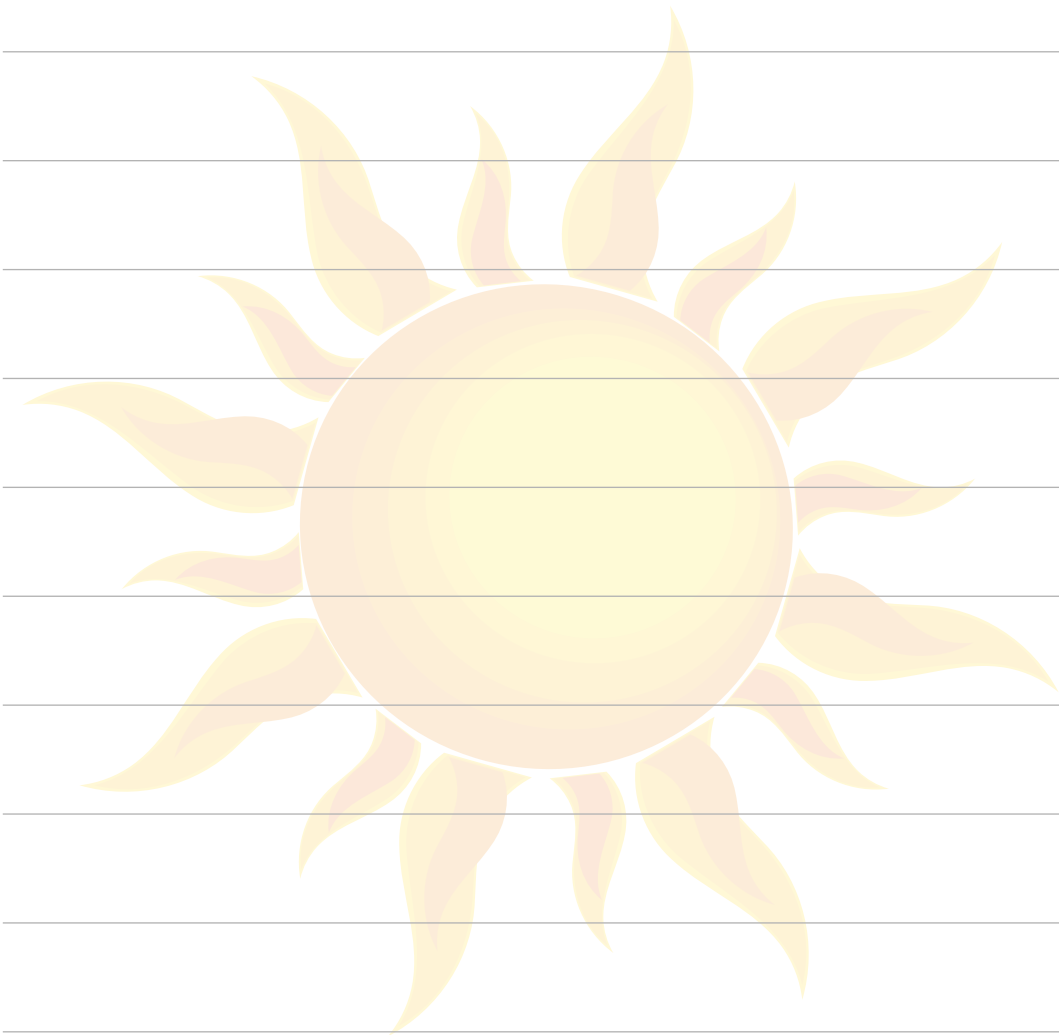
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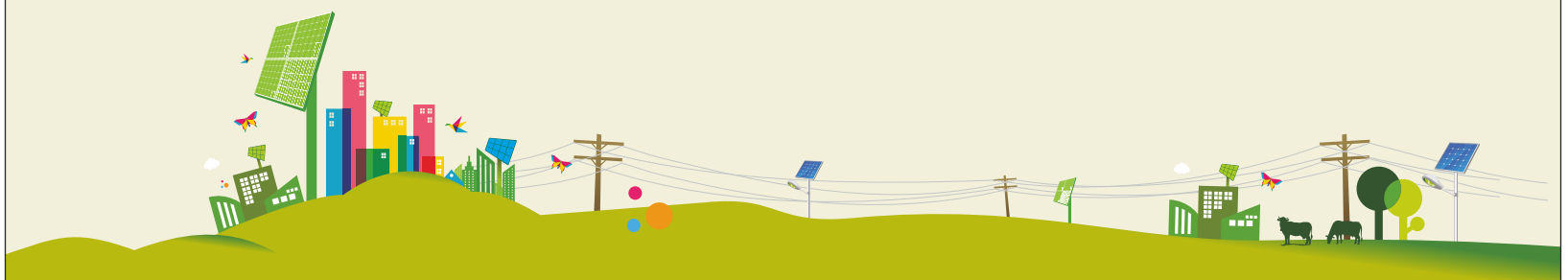
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