

SolarSanchay

Solar Savings Calculator & Bill Tracking Portal

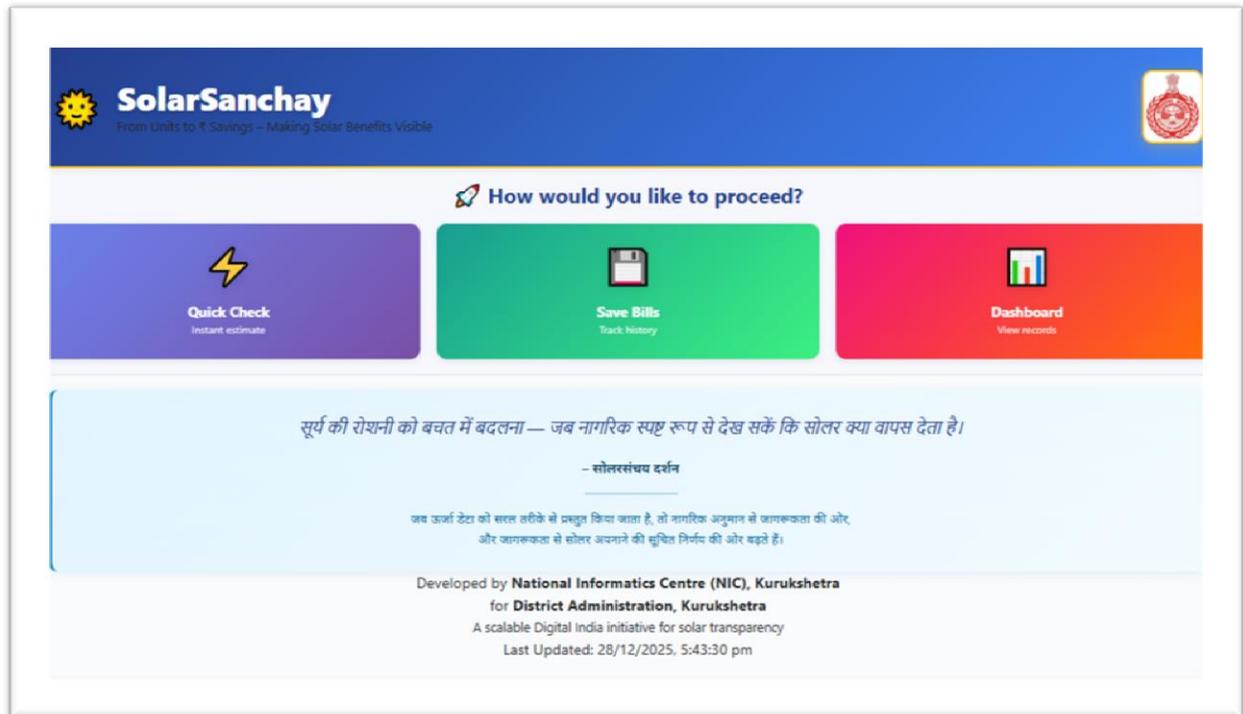
सूर्य की रोशनी को बचत में बदलना – जब नागरिक स्पष्ट रूप से देख सकें कि सोलर क्या वापस देता है

Government of Haryana | NIC Kurukshetra

Developed by: Vinod Kumar, Sr. Director, Scientist 'F',
NIC, Kurukshetra

1. What is SolarSanchay?

SolarSanchay is a comprehensive eGovernance solution developed by NIC Kurukshetra for the Government of Haryana that helps citizens understand their solar energy savings with complete transparency.



Key Features:

- Instant Savings Calculator: Calculate solar benefits without registration
- Bill History Tracking: Maintain complete electricity bill records
- Dashboard Analytics: View trends, savings, and performance over time
- Bilingual Support: Available in English and Hindi
- Mobile-First Design: Works seamlessly on all devices

2. Three Ways to Use SolarSanchay

Mode 1: Quick Check

Get instant solar savings estimate without any registration. Perfect for exploring benefits and understanding potential savings.

Mode 2: Save & Track

Save your bills securely and track savings over time with complete history maintenance. Requires meter number and account number for authentication.

Mode 3: Dashboard

View analytics, edit records, visualize trends, and download reports for detailed analysis of your solar performance.

3. How It Works: Quick Check Mode

1. Enter Bill Details

Input import units, export units, and bill period from your electricity bill

2. Automatic Calculation

System calculates net consumption, applies tariff slabs, and computes solar offset

3. View Savings Report

See estimated solar savings, bill reduction percentage, and net payable amount

4. Optional: Save for Future

Choose to save your bill data for tracking history and viewing trends over time



March 31 Carry Forward Reset Guide

 [मार्च 31 Carry Forward Reset - Complete Guide](#)

⚠ महत्वपूर्ण / Important:
यह policy हर state में अलग है।
This policy varies by state.
कृपया अपने DISCOM से confirm करें।
Please confirm with your DISCOM.

Carry Forward Reset क्या है? / What is CF Reset?

दो अलग-अलग concepts हैं / Two different concepts:

Concept 1: Monthly Carry Forward (लगातार चलती है)

- हर महीने: Previous Closing = Next Opening
- March → April में भी चलती रहती है
- यह monthly billing cycle है

Concept 2: Annual Settlement (FY के अंत में)

- कुछ states में March 31 को final adjustment
- Remaining carry forward zero हो सकती है
- या payment at avoided cost rate
- या carry to next FY (rare)

4. Key Features in Detail

☐ Accurate Calculations

Precise solar savings based on UHBVN/DHBVN tariff structures and net-metering policies. Calculations include all slab rates, fixed charges, and carry forward units.

☐ Mobile Responsive Design

Optimized interface works perfectly on smartphones, tablets, and desktops. Touch-friendly buttons and clear typography for easy mobile usage.



☐ Secure Data Storage

Bill data stored securely with Google Sheets backend and n8n workflow automation. Authentication using meter number and account number.

**SolarSanchay**
From Units to ₹ Savings – Making Solar Benefits Visible

 Login to Dashboard

Meter Number

Account Number

Developed by **National Informatics Centre (NIC), Kurukshehra**
for **District Administration, Kurukshehra**
A scalable Digital India initiative for solar transparency
Last Updated: 28/12/2025, 5:43:30 pm

❑ Bill Scanner

Auto-fill bill details by scanning electricity bills with OCR technology for faster data entry.



Smart Bill Scanner (AI Powered)

Upload your electricity bill for automatic AI extraction

 **AI Assistance - Please Verify**
This scanner uses AI to extract data. Please verify all fields carefully before saving.



Click to Upload Bill Image
or drag and drop here
JPG, PNG • Max 5MB

 **Tips for Best Results:**

- Use clear, well-lit photos
- Avoid shadows and glare
- Include full bill in frame
- Keep text sharp and readable

Account No. →											
Bill No. →											
Meter No. ↓	Meter Reading Date		MDI	Unit	Meter Reading			Consumed Units	Read Rmrk	Mtr Sts	
	Old	New ↓			Old	New	M.F.				
24600455	11/10/2025	15/12/2025	0.00 (KWE)	KWHE	2299	2249	4	944	OK	A	
			3.58 (KWI)	KWFI	2965	4676	4	1114	OK	A	
			0.00 (KVS)	KWHS	56275	57459	1	1184	OK	A	
Arrears Outstanding for the Financial Year ()				Solar Generated Units → 1184		Connection Details					
Description	Previous	Current	Total ()	Total Consumed Units → 1354							
SOP Charges	0.00	0.00	0.00	Net Billed Units	170						
F.S.A	0.00	0.00	0.00	Bill Basis	OK						
Surcharge	0.00	0.00	0.00	Received From Last Bill KWH/KVAH	0/0						
E. Duty	0.00	0.00	0.00	Carried Forward KWH/KVAH → 0/0							
M. Tax	0.00	0.31	0.31								
Fixed Charges	0.00	0.00	0.00	I = IMPORT; E = EXPORT; S = SOLAR							
Excess Credit	0.00	0.00	0.00								
Total Arrear	0.00	0.31	0.31								
Details of Charges for Current Cycle			Details of Amount Payable			Last Payment Details					
Description	Amount ()		Description	Amount ()		Amount ()	3511.00				
Fixed Charges	1602.74		Current Cycle Charges	2778.89		Receipt No	094047000555				
Energy Charges	1102.52		Arrears/Outstanding Dues	0.31		Receipt Date	12/10/2025				
MMC/FC for Reconnection	0.00		Sundry Charges/Allowances	0.00/0.00		Mode of Payment	DD				
Amount to cover MMC	0.00		Professional Adjustment(BR Adj)	0.00		Previous Consumption Pattern					
FPPAS	0.00		LPS Adjustment	0.00		Bill month	Units (KWH)	Units (KVAH)	MDI	Status	
TDS/TCS	0.00/0.00		Adv. Security Deposit	0.00		Feb-2025	593.97	0	4.8	OK	
Excess Load Surcharge	0.00		Am't/In Energy chrg	0.00		Apr-2025	525.59	0	2.68	OK	
Capacitor Surcharge	0.00		Net Payable Amount On Or Before Due Date()	2779.00		May-2025	746.45	0	2.68	OK	
MSC/Green Energy Premium	0.00/0.00		Surcharge()	81.00		Jun-2025	33	0	0	OK	
Line Service Charges	0.00		Gross Amount Payable After Due Date()	2860.00		Aug-2025	343	0	0	OK	
Capacitor Service Charges	0.00		Brief details of Sundry charges /allowances								
Solar Rebate / Prepaid Rebate/Gaushala Rebate	0.00/										
Doyt. Subsidy/Battery Rbt	0/										
Electricity Duty	17.00										
Municipal Tax / P. Tax	54.15										
Total Current Cycle Charges ()	2778.89										

5. Technical Architecture

[INSERT IMAGE: Architecture diagram showing Browser → GitHub Pages → n8n → Google Sheets]

Frontend Technologies

- HTML5, CSS3, JavaScript (Vanilla JS)
- Bootstrap 5 Framework for responsive design
- Single Page Application (SPA) architecture
- Noto Sans Font for proper Hindi rendering

Backend & Integration

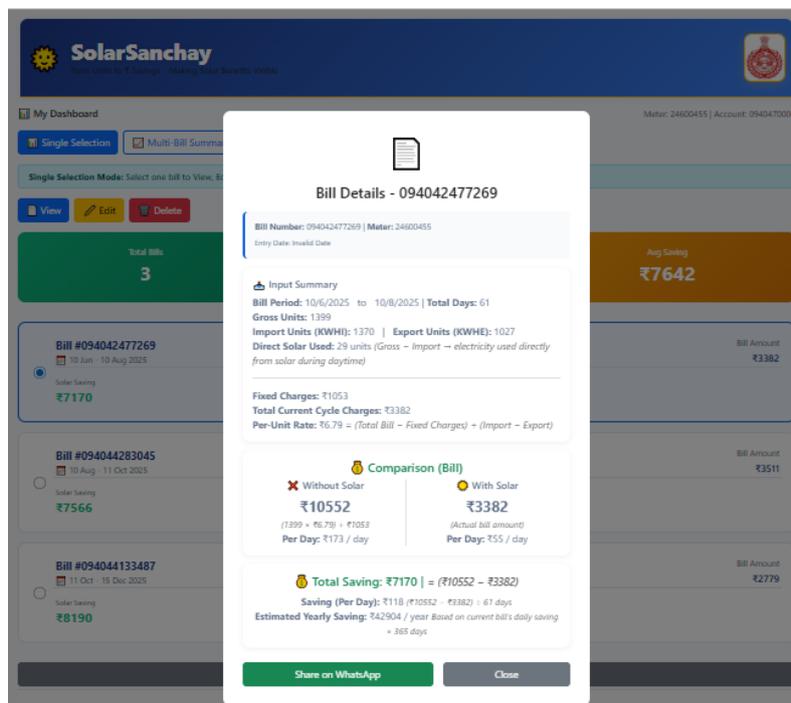
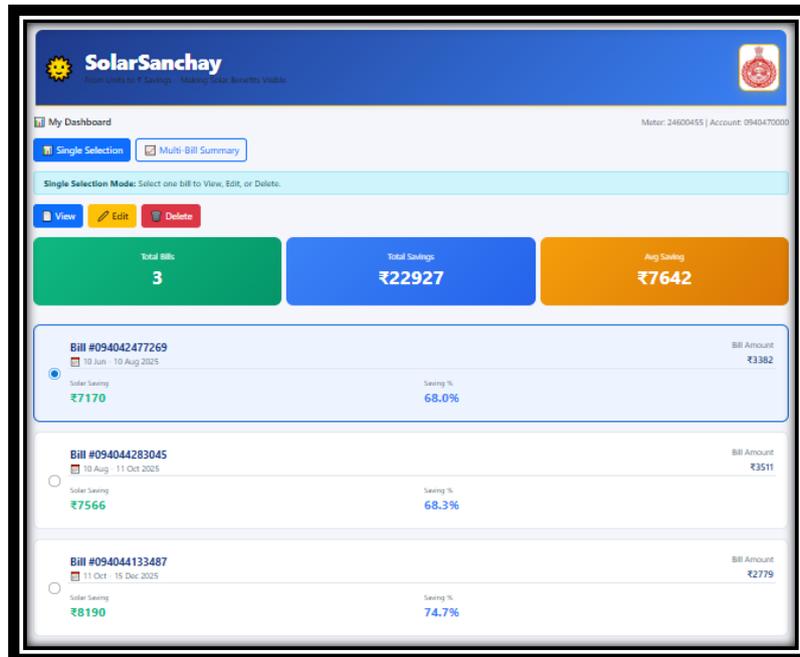
- n8n Workflow Automation for business logic
- Google Sheets as scalable database
- Webhook-based REST API architecture
- GitHub Pages for static hosting
- DuckDNS for dynamic webhook endpoints

✓ Scalable & Maintainable: Modular design with separation of concerns, easy to update and extend with new features

6. Benefits for Citizens

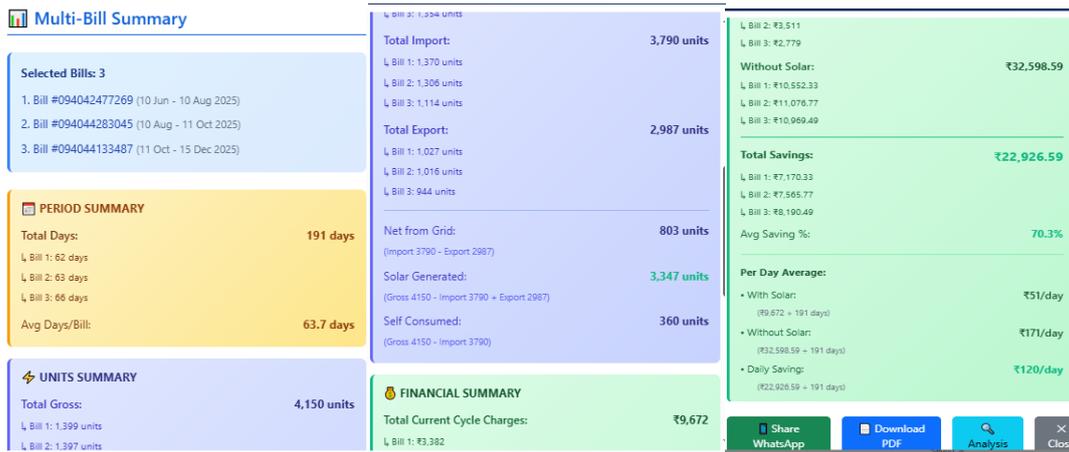
☐ Informed Decision Making

Understand actual solar savings before investing in solar panels. Make data-driven decisions based on real consumption patterns.



☐ Track Solar Performance

Monitor monthly savings, identify trends, and optimize solar usage patterns. See year-over-year comparisons.



☐ Complete Transparency

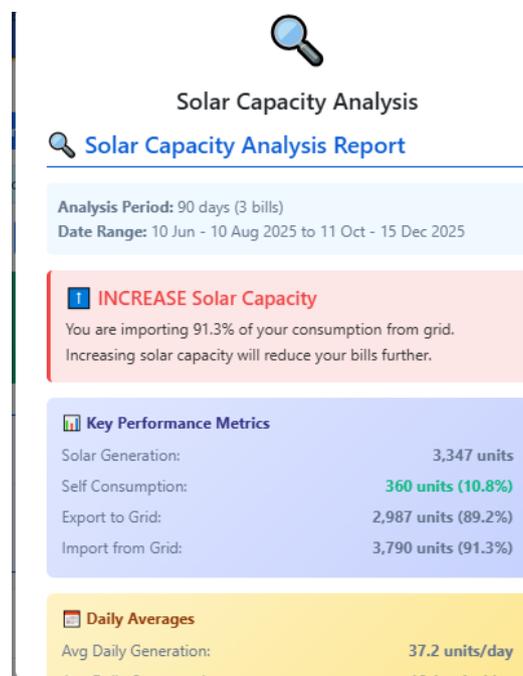
Detailed breakdown of calculations, tariff applications, and net-metering benefits. No hidden formulas.

☐ Time-Saving Tool

Instant calculations instead of manual computation or waiting for utility company reports.

☐ Advanced Analytics Dashboard

Predictive analysis, ROI calculator, and solar panel sizing recommendations based on consumption patterns.



7. Future Enhancements & Roadmap

□ **WhatsApp Bot Integration**

Get bill reminders, savings updates, and query responses via WhatsApp chatbot for easy access.

□ **Public API for Third Parties**

Open API for solar installers, consultants, and energy management platforms to integrate with SolarSanchay.

□ **Native Mobile Applications**

Dedicated Android and iOS apps with offline capabilities and push notifications for bill updates.

8. Impact & Conclusion

eGovernance Excellence

SolarSanchay represents best practices in citizen-centric eGovernance, providing transparent, accessible, and efficient services to the people of Haryana.

Promoting Solar Adoption

By demystifying solar savings calculations, SolarSanchay encourages more citizens to invest in renewable energy, contributing to Haryana's clean energy goals.

Digital India Initiative

As a scalable Digital India initiative, SolarSanchay can be replicated in other states, promoting solar transparency nationwide.

"सूर्य की रोशनी को बचत में बदलना – जब ऊर्जा डेटा को सरल तरीके से प्रस्तुत किया जाता है, तो नागरिक अनुमान से जागरूकता की ओर, और जागरूकता से सोलर अपनाने की सूचित निर्णय की ओर बढ़ते हैं।"

Contact Information

Developed By

Vinod Kumar

Sr. Director, Scientist 'F'
NIC Kurukshetra, Haryana, India

Organization

National Informatics Centre

Website

<https://vksinglakkr.github.io/SolarSanchay>