



INDIA ENERGY STACK

Consumer Energy Passport

Your connection. Your assets. Proven in seconds.

A digital certificate of an electricity connection and everything behind the meter: the tariff category, the sanctioned load, the rooftop solar, the battery, the EV charger. Issued by the DISCOM. Held by the consumer. Checked by anyone in seconds.

Think of the driving licence in DigiLocker. The authority issues it once. The citizen carries it. Any verifier trusts it instantly, without calling the issuing office. The Consumer Energy Passport does the same for a person's electricity record.

01 THE PROBLEM TODAY

Proof that lives on paper

The consumer cannot prove.

To get a green loan, claim a rooftop-solar subsidy, or sign up with a new DISCOM after moving cities, a consumer must prove their connection and assets. Today that proof is a manual letter from the DISCOM, followed by repeated KYC and weeks of back and forth.

The DISCOM cannot see.

As solar panels, batteries and EV chargers spread behind consumers' meters, the DISCOM often cannot say what is connected, at what capacity, or where. Verification requests pile up, and forged sanction letters are hard to catch.

A small-business owner in Visakhapatnam wants a green loan. The bank asks for proof of her connection and her 5 kW rooftop system. With the Passport, she shares a verified digital certificate from her phone. The bank checks the DISCOM's seal in seconds. No letters, no waiting.

02 SCOPE

What it is, and what it covers

One record for one connection. The Passport states:

- who the consumer is, and which DISCOM issued the record;
- the service connection, its tariff category and sanctioned load;
- the meter (and a generation meter, where one is used);
- each asset behind the meter: solar, battery, EV charger or inverter, with its capacity and inspection status.

What it deliberately leaves out

- × No live meter readings. Consumption history is a separate note: the Consumer Meter Digest.
- × No new central database. The DISCOM's records stay exactly where they are.
- × No permanent snapshot. When a meter is swapped or capacity changes, the old Passport is cancelled and a fresh one issued.

03 HOW IT WORKS

Four steps, start to finish

1

Issue

The DISCOM checks its own records and inspections, then issues the Passport as a digitally signed certificate.

2

Hold

The consumer receives it in DigiLocker or another digital wallet. It belongs to them, like a document, not a login.

3

Share

The consumer shares only the fields a verifier needs. Sanctioned load for a lender. Solar capacity for a marketplace. Nothing more.

4

Verify

The bank or portal checks the DISCOM's seal on its own, in seconds. No call to the DISCOM. No paper.

FOUR TERMS, IN PLAIN WORDS

Verifiable credential · a digital certificate with a tamper-proof seal from the issuer.

Wallet · an app that holds your digital documents, such as DigiLocker.

Digital identity (DID) · an identity for a person or a device that anyone can check independently.

Selective disclosure · showing one field of a certificate without revealing the rest.

What IES provides

A verified identity for everyone and everything.

The consumer, the meter, the solar unit, the transformer: each gets a digital identity anyone can check. Existing consumer numbers are reused, not replaced.

One standard certificate format.

Every DISCOM issues the Passport the same way. A bank builds its verification once and it works across DISCOMs and States.

A tamper-proof seal.

Any change to the certificate breaks the DISCOM's digital seal and is caught at the first check. Forged letters and ghost assets do not pass.

Share one field, keep the rest private.

Selective disclosure lets the consumer reveal exactly what a verifier needs and nothing else.

What each stakeholder gains, and how

Consumers

Value: one portable proof for loans, subsidies and service sign-ups. On moving to a new city, the same record speeds up onboarding with the new DISCOM, with no repeated KYC.

How: the Passport sits in their own wallet, and they control what each verifier sees.

DISCOMs

Value: fewer verification letters and calls, less fraud, and a clean register of what sits behind every meter, as a by-product.

How: the Passport is issued from records the DISCOM already holds. Nothing new to build or maintain.

Banks, marketplaces & installers

Value: verification drops from weeks to seconds, with far higher trust than scanned PDFs. Green loans and instant solar quotes become viable products.

How: they check the DISCOM's published seal themselves. No callback, no manual desk.

Regulators & government

Value: a consistent, auditable record of consumer connections and assets across every licensee. Better data for schemes such as PM Surya Ghar.

How: every DISCOM issues to the same public specification, so records compare cleanly.

WHERE IT STANDS TODAY

Live in pilot. Passports have been issued and stored in DigiLocker, ready to back a green loan, a subsidy claim or a service enrolment.

APEPDCL · Andhra Pradesh

DGVCL · Gujarat

Tata Power · Mumbai

PVVNL · Uttar Pradesh

BEFORE IES

No portable, verifiable consumer energy record existed. Proof meant manual letters, one DISCOM at a time.

WITH IES

A signed certificate in the consumer's wallet, checked in seconds, reusable across DISCOMs and States.

WHAT IES DOES NOT DO

IES does not store any data. The consumer's record stays with the DISCOM, where it is today.

IES does not replace any system. Billing, customer and meter systems keep working as they are.

The DISCOM adds one small piece of connecting software, called an adapter. Nothing else changes.

Read the full specification

india-energy-stack.gitbook.io/docs → Use Cases → Consumer Energy Passport