

**Building the New Bharat with the Power of the Sun**  
By Vineet Mittal | Chairman, Avaada Group

### **A Solar-Powered Bharat: Not a Dream, a Destination**

Picture this: by 2030, every home, every factory, every handheld device in Bharat runs not on coal or gas, but on sunlight. No new thermal plants, no new gas lines—just solar energy from our skies, wind from our coasts, and batteries storing power for when the sun rests.

This is not wishful thinking. It is a blueprint for **energy independence, economic security, and environmental leadership**. And Bharat has both the **capacity and the clarity** to make it happen.

But if solar power is so promising, why does it still account for just **21.8%** of our installed capacity?

The answer lies not in technology, but in transition.

### **The Real Cost of Going Solar**

Yes, solar panels are cheaper than ever. But powering a house or a factory with solar is not just about installing a few panels. You need:

- Inverters
- Wiring
- Batteries (for night-time use)
- Permits and compliance

For many rural households and farming communities still dependent on subsidized coal power, the shift feels like giving up a functional old car for a shiny new one—**but the new one needs a custom-built road to run on**.

While long-term savings are undeniable, the **upfront cost can be daunting**. That is why **access to finance** is critical. We must build a system that makes **solar adoption as simple as getting a mobile SIM**—low-entry, fast-install, and government-supported.

### **Batteries: The Silent Partner in the Solar Story**

The sun is generous, but it doesn't work nights. To truly run on solar, we need to **store sunlight**—and that's where **Battery Energy Storage Systems (BESS)** come in.

These are not the batteries in your phone—they're large, smart systems that can power cities. Encouragingly, the cost of electricity from **Solar + BESS is now nearly half that of a new coal plant**.

Investing in **BESS manufacturing, recycling, and deployment** is not optional—it's urgent.

### **The Weather Factor: Geography Is not Destiny**

India is blessed with solar potential—states like **Rajasthan, Gujarat, Maharashtra, Karnataka, and Tamil Nadu** are already leading. But what about **cloudy eastern or foggy northern states**?

Solar output varies by season and location, but India's **robust inter-state transmission network (ISTS)** allows for **power balancing across regions**. This grid is the unsung hero of our energy transformation and will be central to India's success in the "**One Sun, One World, One Grid**" vision.

### **Land Use: The Next Big Debate**

Large solar farms need space—and lots of it. But space is contested. Agricultural land, forests, or homes can't always make way for panels.

Luckily, we have the **Thar Desert**, capable of powering **all of India and even exporting to neighbours**. We also have innovative options:

- **Floating solar** on reservoirs
- **Solar panels over canals**
- **Agrivoltaics**—farming under panels

Solar need not be a land-grabber. It can **coexist with agriculture, nature, and livelihoods**.

### **Upgrading an Outdated Grid**

The grid we use today was built for coal: centralized, slow, and one-way. Solar is the opposite—**distributed, dynamic, and digital**.

Upgrading the grid isn't just necessary—it's an opportunity. With smart metering, AI-driven energy trading, and smart substations, we can create a **21st-century infrastructure for a 21st-century economy**.

### **Changing Minds: The Final Frontier**

Many still ask:

“Can solar run an industrial Bharat?”

“Will renewables kill jobs?”

The truth: **solar already powers metro trains, steel plants, and data centers**. And it creates **more jobs per megawatt** than coal ever did.

But myths stick. That's why we need a **nationwide education and awareness campaign**, especially in schools and rural areas. The solar revolution must become a **people's movement**.

### **The Sun is Waiting, Are We Ready?**

Building a solar Bharat isn't easy. It's a complex path—full of hurdles in policy, finance, technology, and perception.

But the opportunity before us is enormous. Clean skies, energy security, job creation, and global leadership in green technology. What's stopping us?

The sun rises every day. It's **clean, reliable, and limitless**. Bharat doesn't need to wait for miracles from outside. The miracle is already here, **waiting for us to harness it**.

Let's build the new Bharat—**powered by sunlight, united by purpose, and driven by vision**.