

# Project Finance Terminology and Funding Structure

Renewable Energy Projects in the SAARC  
Region

**Vivek Mishra**

Capital cost • funding • cash flow • debt service • equity return

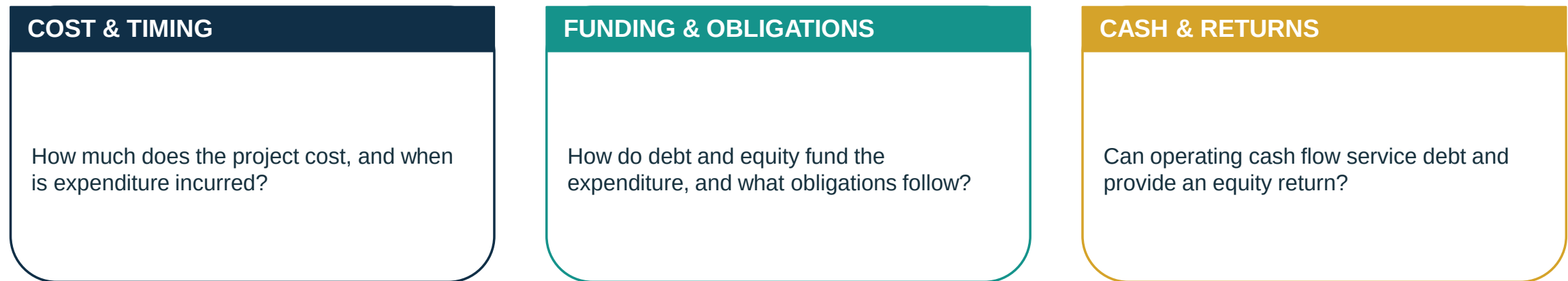
**CASE: SUNDARBAN SOLAR 50** | Illustrative 50 MW solar PV project in Bangladesh • 18-month construction • long-term utility PPA

# The Financial Architecture of an RE Project

02



## The model links five building blocks

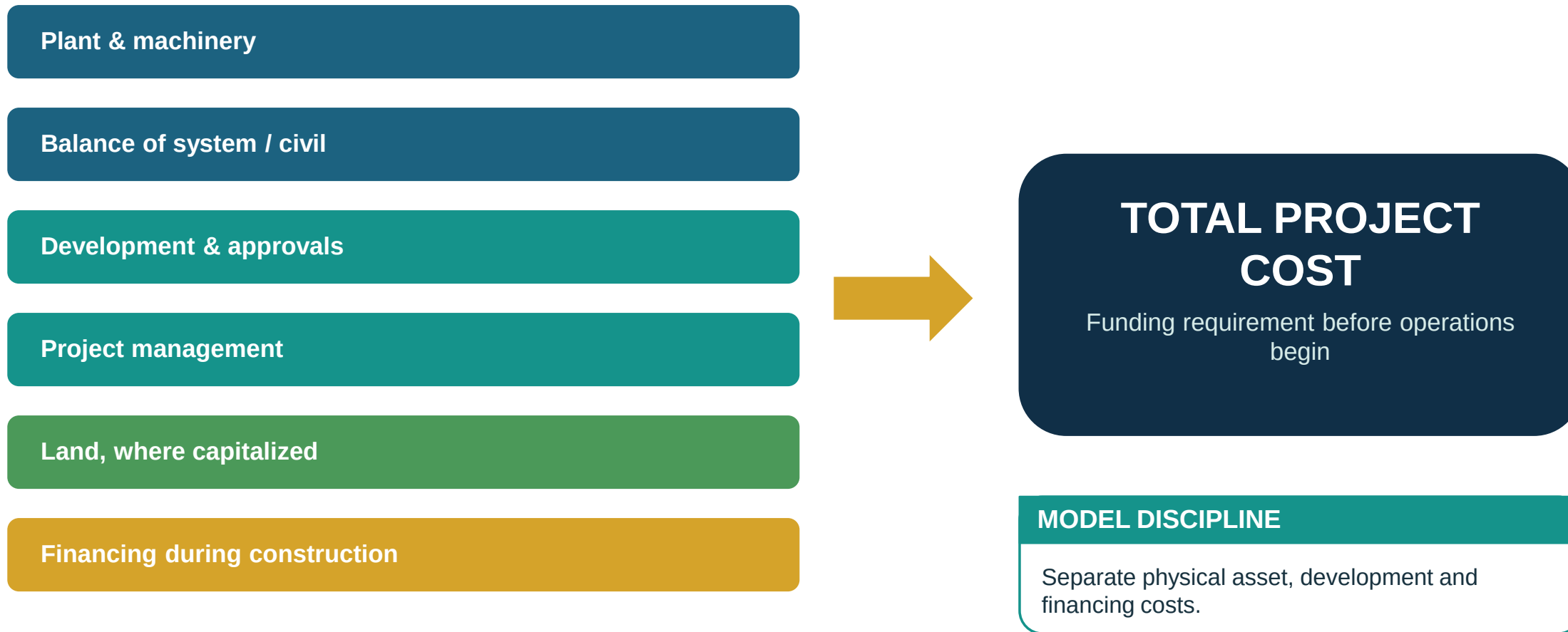


**SAARC context: financing choices differ, but the cash-flow logic is common.**

**CASE FRAME** | 50 MW solar PV .illustrative project finance case • all figures are training assumptions

Project cost → funding → operation → cash flow → debt service and equity return

# Capital Cost Build-Up: What Must Be Funded?



**CASE CAPEX** | Plant & BOS: \$31m • development/management: \$2m • land/upfront: \$1m • IDC & fees: \$2m → TPC \$36m

The capital-cost schedule is the foundation for debt and equity drawdown.

# Land: Capital Cost or Operating Cost?

04

## LAND

### UPFRONT / CAPITALIZED

Acquisition or qualifying upfront land-related cost

- Initial funding requirement
- Treatment in project cost assumptions

### RECURRING / OPERATING

Recurring lease or land-use payment

- Operating cash outflow
- Annual cost assumptions

**Accounting and tax treatment should follow the applicable national framework.**

**CASE LAND** | 20-year lease: \$0.5m upfront in project cost + \$0.12m recurring annual lease in O&M

**Land treatment changes both the timing and classification of project cash flows.**

# Funding Structure: Debt and Equity

05

## TOTAL FUNDING

```
graph TD; TF([TOTAL FUNDING]) --> D[DEBT]; TF --> E[EQUITY];
```

### DEBT

Contractual financing obligation

- Interest
- Principal repayment
- Tenure and repayment profile

Priority claim on project cash flow

### EQUITY

Investor capital at risk

- Residual cash-flow claim
- Return expectation
- Equity redemption, where modeled

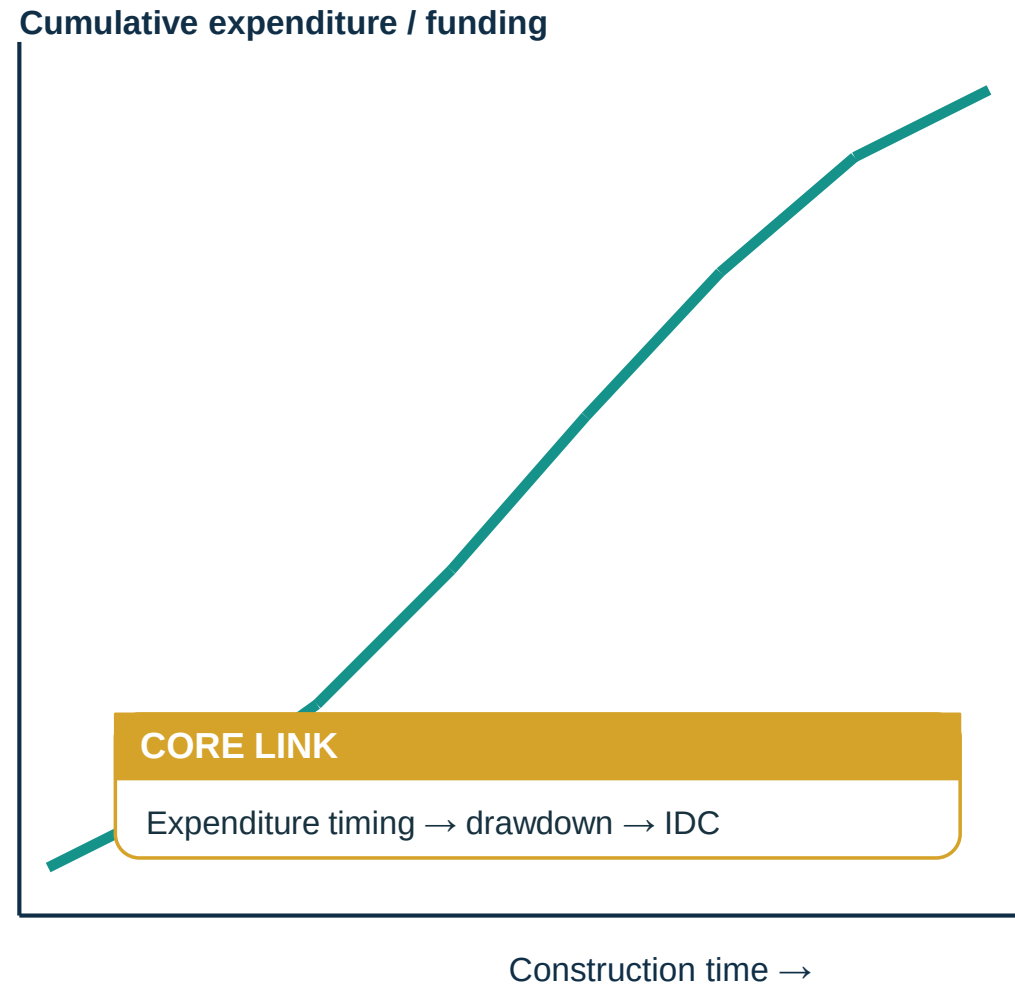
Absorbs residual project risk

**CASE FUNDING** | 70% debt / 30% equity → debt \$25.2m • equity \$10.8m

Do not assume one universal debt-equity ratio: financing structure is a project-specific model input.

# Construction Period and Drawdown Profile

06

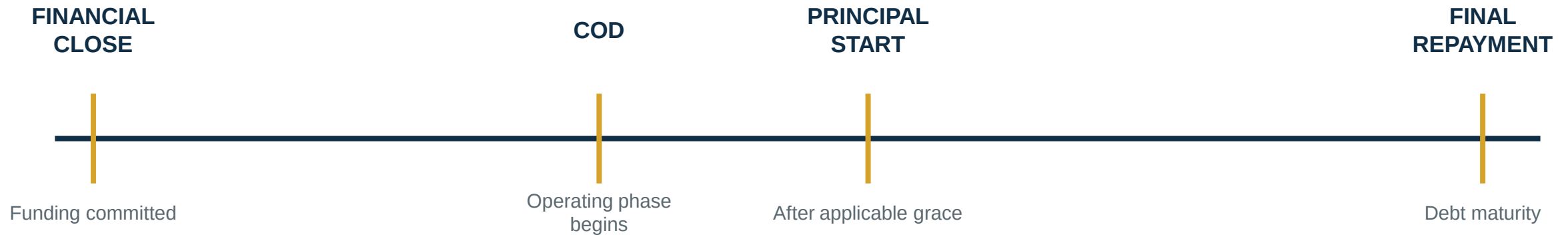


**CASE DRAWDOWN** | 18 months construction • illustrative spend: 20% / 50% / 30% across three phases • funding follows spend

Funding should follow expenditure timing, not simply total project cost.

# Debt Structure: Tenure, Grace Period and Repayment

07



**KEEP THE TERMS SEPARATE**

Construction period  $\neq$  drawdown period  $\neq$  grace period  $\neq$  debt tenure

**CASE DEBT TERMS** | Illustration: 12-year debt from COD • 1-year principal grace • semiannual principal thereafter

Debt timing determines interest, principal payments and the cash burden during operations.

# Financing Cost: During vs After Construction

08

COD

## DURING CONSTRUCTION

Debt drawdowns  
↓  
Interest accrual  
↓  
Interest during construction (IDC)  
+  
Applicable financing fees  
↓  
Project funding requirement

## AFTER CONSTRUCTION

Opening loan balance  
↓  
Interest expense  
+  
Principal repayment  
↓  
Debt service  
↓  
Cash available to equity

**CASE INTEREST** | Illustrative debt rate: 8% p.a. • construction interest capitalized within IDC • post-COD interest paid from operations

The same loan has different model effects before and after commercial operation.

# Operating Cost and Working Capital

09

## OPERATING PHASE

### FIXED O&M

Recurring costs that do not directly vary with generation assumptions.

### VARIABLE / OTHER O&M

Operating costs linked to use, output or other project-specific assumptions.

### WORKING CAPITAL

Funding needed because cash receipts and operating payments do not always occur at the same time.



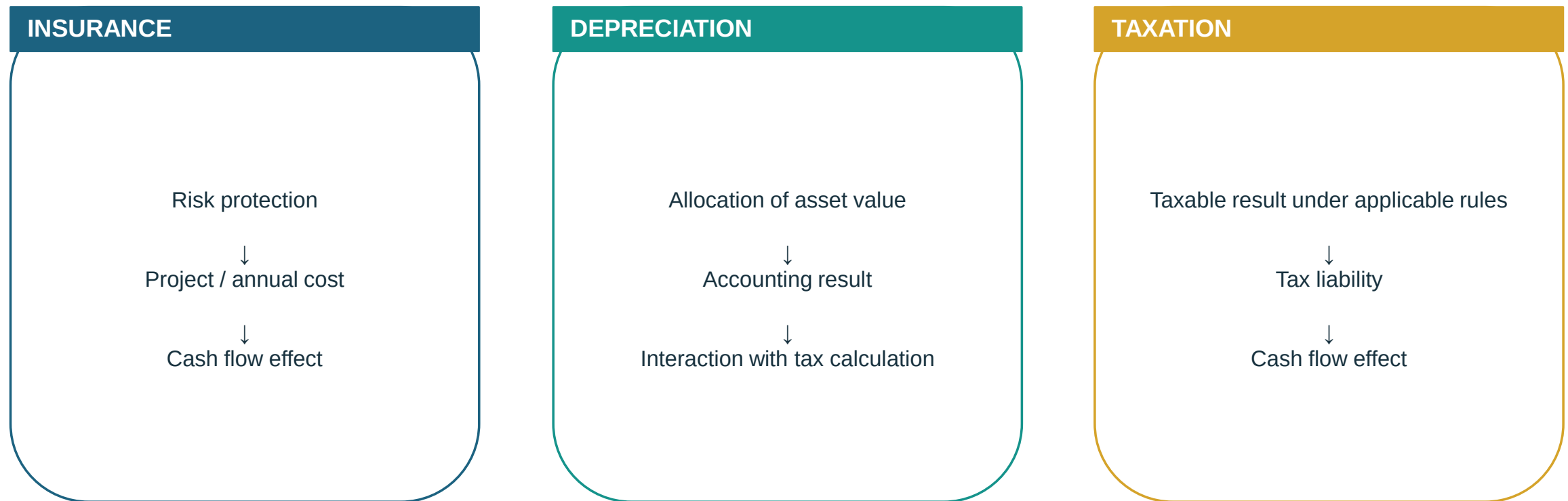
## OPERATING CASH FLOW

**CASE OPEX & WC** | Year-1 fixed O&M \$0.60m • land lease \$0.12m • insurance \$0.10m • working-capital reserve \$0.15m

OPEX is a cost. Working capital is a timing requirement for operating cash needs.

# Insurance, Depreciation and Taxation

10

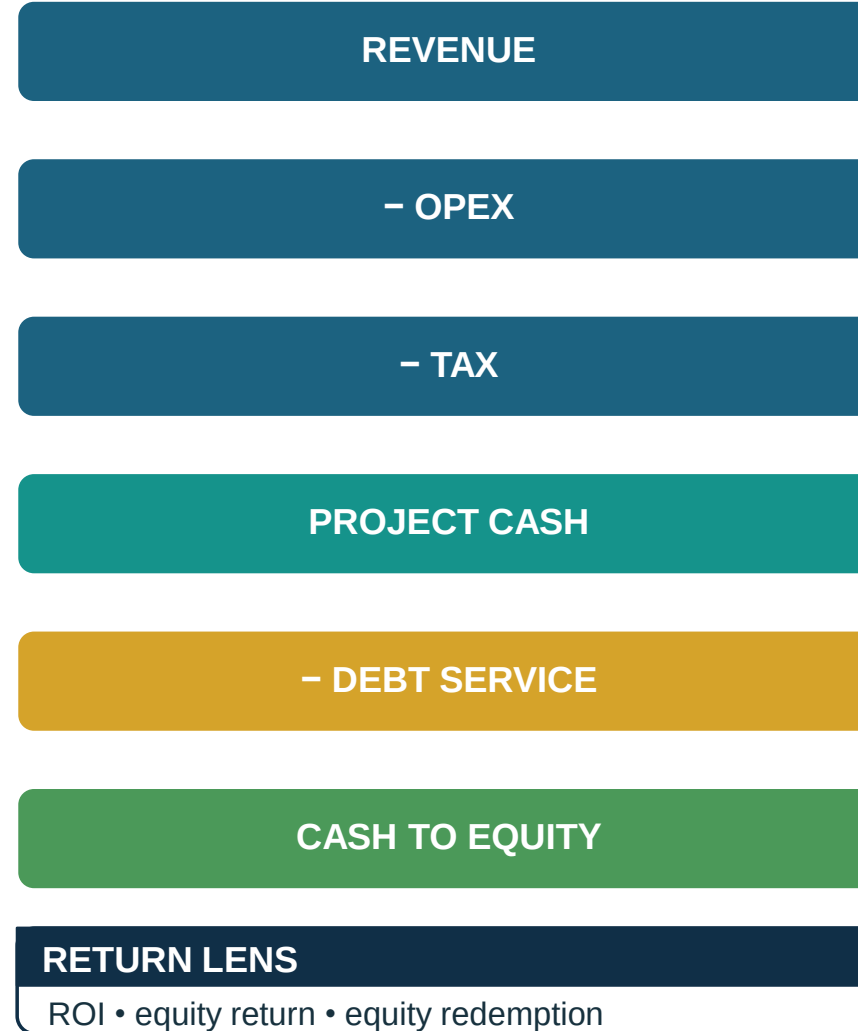


**Cash expenses ≠ accounting charges ≠ tax effects**

**CASE ACCOUNTING** | Depreciation and tax remain jurisdiction-specific model inputs • training case keeps these as clearly labeled assumptions

For country teams, use the accounting and tax rules applicable to the relevant jurisdiction.

# From Project Cash Flow to Investor Return



**CASE CASH FLOW** | Illustrative net generation 82 GWh/year • tariff \$0.075/kWh → revenue \$6.15m before operating costs

Debt gets its contractual cash flows first; equity receives the residual cash flow and bears residual risk.

# The Integrated Financial Model: One Logic Across SAARC

12

