1. Milestone ladder and stage values

Chapters 1 and 10. Value at a stage = probability of reaching NTP x NTP price, discounted at the development rate to the stage date, less each later outlay weighted by the chance of surviving to it.

Project		**NTP price ($ million)**	
Development rate		**Valuation date**	

Stage date	Milestone reached	Probability of reaching NTP	Outlays still to come ($m)	Stage value ($m)	$ per kWac	Example: Cedar Hollow
	Site control: options signed, first screening					1 Jan 2022: 20%, 0.02
	Interconnection request filed in a cluster					1 Jan 2023: 30%, 0.54
	Cluster study results; permit application filed					1 Jan 2024: 45%, 2.49
	Conditional use permit granted					1 Jan 2025: 65%, 7.13
	Interconnection agreement signed					1 Jan 2026: 80%, 13.77
	PPA signed; physical work begun					1 Jul 2026: 92%, 25.61
	Notice to proceed	100%				1 Jan 2027: 100%, 35.10

Item	Owner	Due	Done: evidence / date
Each probability is tested against the developer's own record of moving projects from stage to stage, not a market average alone			
A one-year slip of every later milestone is priced (Chapter 5: the 2025 stage value falls from $7.13 million to $5.86 million, $1.27 million from time alone)			
The credit start date travels with the project: physical work or 5 percent safe harbor before 4 July 2026, or a placed-in-service plan by 31 December 2027			
The step with the largest value jump is named, and who retires it (Cedar Hollow: PPA and start of construction, +$11.8 million in six months)			
Platform: value = stage value per MWac x MWac at each stage; megawatts are not value			

2. Site screening sheet

Chapter 2. Five screens, then a levelized cost at 7.0 percent over 35 years, with and without the credit. Kill early and cheaply.

Pipeline / region		**Screened by**	
Date		**Decision meeting**	

Item	Owner	Due	Done: evidence / date
THE FIVE SCREENS (pass / fail / unknown, with the evidence)			
Grid: substation or line within reach, headroom, queue congestion and the network upgrades the cluster will carry			
Resource: net capacity factor (solar) or hub-height wind speed, data source and period			
Land: contiguous acres from willing owners, about 7 acres per MWac for single-axis tracking solar; rent per acre-year			
Permitting: county rules, setbacks, sensitive species and wetlands, local opposition, moratoriums			
Credit and bonus: energy community status, start-of-construction plan, foreign entity exposure			

Site	Capacity factor	Gen-tie (mi)	Upgrades ($m)	Rent ($/acre)	Energy comm.	Capex ($m)	P50 MWh	LCOE no credit	LCOE with credit
Example: Cedar Hollow	26.0%	6	18.0	1,000	No	221.0	341,640	71.70	53.28
Example: Bram Creek	26.8%	14	41.0	850	Yes	248.2	352,152	75.51	55.26
Example: Oxley Flats	24.8%	2	9.0	1,300	No	209.9	325,872	73.54	55.13

Gen-tie at $0.5 million a mile. A higher capacity factor does not win if it comes with a long gen-tie and large upgrades: Bram Creek has the best resource and the highest cost.

3. Land and lease abstract, title and curative tracker

Chapter 3 and Appendix B.1. One line per parcel: the option becomes a lease, and the rent moves by an order of magnitude when the plant starts to earn.

Project		**Acres optioned / leased**	
Land manager		**Data date**	

Term	This project	Example: Cedar Hollow
Option payment ($ per acre-year)		40
Lease rent from COD ($ per acre-year)		1,000 (25 times the option)
Escalation a year		2%
Operating term and extensions		35 years + 2 x 5
Rent in the first year / in the last year ($m)		1.05 / 2.06
Total rent, nominal ($m) and share of operating cost		52.5; about 22%
Decommissioning security (lease and permit)		$7.8 million (2027 dollars)

Parcel / owner of record	Acres	Option signed	Exercised	Assignable without consent	Lender cure rights	Title commitment	Survey	Curative items open	Easements (gen-tie)

Lenders and buyers read first: assignment without consent, leasehold mortgage and cure rights, estoppels, crop and access rights kept by owners, side letters made outside the documents.

4. Energy yield review sheet

Chapter 4 and Appendix B.2. Losses compound; uncertainties combine as a root sum of squares; P90 ten-year is not P90 one-year.

Project		**Energy report (author, date)**	
Layout assumed		**Reviewer**	

Loss	This report	Example
Soiling and snow		2.0%
Near shading and row-to-row shading		1.5%
Temperature		6.0%
Module quality, mismatch and DC wiring		2.5%
Inverter efficiency		2.0%
Clipping at the loading ratio		1.5% (1.30)
AC wiring, transformers and gen-tie		1.5%
Availability		1.0%
Total, compounded: 1 - product of (1 - each loss)		16.7% (18.0% if summed)

Uncertainty (one standard deviation, share of P50)	This report	Example
Interannual variability (one year)		5.0%
Long-term resource estimate		4.0%
Energy model and losses		3.5%
Combined, one year: root of the sum of squares		7.3%
Combined, ten-year average: interannual divided by root 10		5.5%

Level	z	Share of P50	MWh, first year	Example
P50	0			100.0%; 341,640
P75, ten-year	0.6745			96.3%
P90, ten-year	1.2816			92.9%; 317,360
P90, one-year	1.2816			90.6%; 309,689
P99, one-year	2.3263			83.0%; 283,645

Same energy figure in the model, the PPA, the EPC guarantee and the lender's case. Each 1 percent of energy is worth about $3.2 million of development value at Cedar Hollow.

5. Permit critical path and interconnection deposit ladder

Chapters 5 and 6. The permit sets the earliest NTP; the queue sets the money at risk. Both get a date, an owner and a cost of delay.

Project		**County / state**	
ISO / transmission owner		**Updated on**	

Milestone	Planned date	Actual / forecast	Evidence	Example: Cedar Hollow
Environmental surveys (seasons)				2022 to 2023, two seasons
Permit application filed				January 2024
Public hearings				two in 2024
Conditional use permit granted; appeal period ended				December 2024
Interconnection agreement signed				January 2026
PPA signed; physical work begun				June 2026
Notice to proceed				1 January 2027

Queue stage	Rule	Amount ($m)	Posted on	Refundable if withdrawn?	Example
Cluster request	Study deposit				0.15
Cluster request	Readiness deposit: 2 x study deposit				0.30
Restudy	5% of assigned network upgrades				0.90
Facilities study	10% of assigned network upgrades				1.80
Interconnection agreement	20% of assigned network upgrades				3.60

Network upgrades	Development value	Change	Highest premium a buyer could pay
Base: 18.0	33.4	0.0	32.8
30.0	21.6	minus 11.8	21.0
45.0	6.8	minus 26.6	6.3
This project:			

A one-year permit slip, every later milestone with it, takes the 2025 stage value from $7.13 million to $5.86 million; in 2026 it could also cost the credit. If the transmission owner's work is late, nobody in the contract chain pays.

6. PPA comparison grid

Chapter 7 and Appendix B.5. Judge a PPA by the risks it removes, then convert every term into development value at the same discount rates.

Project		**Offers compared**	
Commercial lead		**Date**	

Term	Offer 1	Offer 2	Merchant	Example: Norland (U) / Quillon (C)
Products sold (energy, RECs, capacity)			all, at market	bundled / energy swap + RECs
Delivery or settlement point			node	project node / hub
Price, escalator, term				$57.00 +2%, 20 yrs / $63.00 flat, 15 yrs
Settlement: as-generated or fixed shape; negative prices				n/a / as-generated
2028 revenue ($m)			17.52	19.47 / 22.64
Development value ($m)			minus 38.2	33.4 / 15.2
Break-even price ($/MWh)				55.47 escalating / 67.33 flat
Value of $1.00/MWh ($m)				3.8 / 2.8
Highest premium ($m)				32.8 / 14.7

Risk	Offer 1	Offer 2	Example: U / C / M
Hub price level			buyer / buyer for 15 years / project
Shape (capture rate)			buyer / buyer / project
Basis (node minus hub)			buyer / project / project
Capacity price and accreditation			buyer / project / project
Volume (weather)			project in every case
COD deadline, delay damages, termination			line up with the EPC schedule
Counterparty credit, collateral, assignment			

An analyst who ranks offers on first-year revenue picks the virtual PPA; the development value picks the utility PPA by $18.2 million.

7. EPC review: delay damages, retention and performance

Chapters 9 and 15 and Appendix B.7. Test whether the damages cover what a late COD really costs the owner, cause by cause.

Project		**EPC contractor**	
EPC price ($m)		**Guaranteed COD**	

One month of delay	This project ($m)	Example ($m)
Operating margin lost (first-year EBITDA / 12)		1.23
Time value of the credit pushed back		0.42
Construction loan interest for one more month		0.64 (see Case 1)
PPA delay damages owed to the offtaker		not in the case
Owner's cost, all-in		2.29
EPC delay damages (rate x MWac x 30.4 days)		1.60 ($350/MWac/day)
Left with the owner, contractor at fault		0.70
Months to reach the damages cap		11.9 (15% of 126.3)

Cause of delay	Who pays	Remedy to negotiate
Contractor's own scope (piling, productivity, failed tests)	EPC damages up to the cap	rate covers the all-in cost
Owner-furnished modules late or defective	owner; extension of time to the EPC	supply delivery damages at about $502/MWac/day, not the EPC rate
Transmission owner's upgrades or switching station late	nobody in the contract chain	schedule float, PPA relief for grid delay

Item	Owner	Due	Done: evidence / date
Retention 5% on progress payments (Cedar Hollow: $6.3 million at completion), released at final completion			
Capacity test: at least 97% of the guaranteed level; buy-down at about $21.11 per kWac per percent of energy			
Owner's contingency (5%, $9.2 million) held outside the EPC price; change order triggers listed			
Prevailing wage and apprenticeship flowed down to every subcontractor, with payroll records			

8. Credit file and NTP sale pricing

Chapters 11 and 14 and Appendices B.8 and B.9. The credit file is where a 2026 deal is won or lost; the price splits into reimbursement and premium.

Project company		**Construction began on**	
Method relied on		**Placed-in-service deadline**	

Item	Owner	Due	Done: evidence / date
BEGINNING OF CONSTRUCTION AND CONTINUITY			
Physical work of a significant nature under a binding written contract (Cedar Hollow: June 2026, $4.5 million: transformer made off site, substation piles), or the 5 percent safe harbor			
Evidence dated on or before 4 July 2026: contracts, invoices, photographs, manufacturer records			
Continuous program of work, month by month; placed in service by the end of the fourth calendar year after the start (31 December 2030)			
CREDIT CHOICE, BONUSES AND TRANSFER			
PTC or ITC and why (Cedar Hollow: PTC worth $73.0 million in present value, ITC $46.3 million, none minus $39.6 million of value)			
Energy community and domestic content support; material assistance cost ratio against the threshold of the start year (40% in 2026)			
Transfer agreement: price per dollar (0.925 PTC, 0.93 ITC), timing, indemnities, insurance, recapture exposure			

NTP sale	This deal ($m)	Example ($m)
Reimbursement: interconnection security posted		3.6
Reimbursement: physical work		4.5
Premium (only part that moves in a negotiation)		27.0 ($0.180/Wac)
Price paid at NTP		35.1
Buyer's development value / highest premium		33.4 / 32.8
Headroom kept by the buyer		5.8
Milestone payments, if any (amount, milestone, probability)		2.0 / 3.0 at LGIA / 5.0 at NTP

Buy the project company that holds the contracts, permits and work performed, not a set of assets, so the start date travels with the project.