

The background is a collage of business-related images. On the left, a portion of a white computer keyboard is visible, showing keys like 'enter', 'return', 'PgUp', 'PgDn', and 'Home'. On the right, there is a blue and white bar chart with a grid, showing values ranging from 0 to 350. In the center, a black spiral-bound notebook is open, with the words 'CREDIT RISK MANAGEMENT' printed in yellow on its cover. A silver pen is resting on the notebook. The overall lighting is warm and golden.

# PPA Credit Risk Analytical Tool

CREDIT RISK  
MANAGEMENT

**AI+ENERGIZER**

LINKING STRATEGY AND MACHINES

## “No company is too big to fail”

Before the Corona virus times, credit risk was just one of the many risks that needed to be covered under a (Corporate) PPA. With today's Covid-19 pandemic credit risk probably has become the top priority risk to be managed under the PPA. Utilities, corporates and suppliers are all severely hit by the economic downturn, hurting their credit standing.

One thing we have learned since the demise of Enron in 2001 and the bankruptcy of Lehman brothers as a result of the credit crisis in 2008,

is that no company is too big to fail. Whether it is one of the leading energy companies, a big corporate or an SME firm, over the 15-20 years lifetime of a PPA a lot can happen.

Also market electricity prices could fall sharply in the 2020s, of which we could already catch a glimpse in March to May this year, when power demand slumped. Weak economies, and/or hectic renewable energy build-out, could result in chronically low power prices this decade.

## “ Credit Risk Management for PPAs could be the difference between success and failure “

If so, counterparty or credit risk would loom large. Some corporate buyers could feel pressure to renegotiate, or even default, on their PPAs. Some might even go bankrupt, effectively canceling previously agreed power purchase deals. And utilities that backed PPAs

could also be under financial pressure, and struggling to honor them.

All this make assessing counterparty risk an important aspect for you doing business and the credit risk should be properly mitigated under the PPA contract.

## **Our PPA Credit Risk Analytical Tool**

Only relying on your counterparties' track record for payment as a key metric to assess their creditworthiness simply is not enough. Being able to quantify the credit risk is critical, especially for PPAs to which the risk of payment default would have serious consequences. Mostly a project company is exposed heavily to one or a few counterparties at best.

**“Not having a balanced and proactive plan for credit risk is a recipe for disaster!”**

### **How would the tool help you?**

- Understand your counterparty's liquidity, profitability, and cash flow – to protect yours!
- Reduce expected losses due to counterparty default
- Improve revenues by reducing credit risk reserves
- Demonstrate the strategic vision, corporate governance, and professionalism lenders expect.

## Use your trusted Excel with our AI Power

Risk analysis is the systematic use of available information to determine how often specified events may occur and the magnitude of their consequences. Quantitative risk analysis attempts to assign numeric values to risks, either by using empirical data or by quantifying qualitative assessments.

The most widely used platform for performing quantitative risk analysis is the spreadsheet model. Many people still unnecessarily use deterministic risk analysis in their

spreadsheet models, but now you could easily add Monte Carlo simulations using our state-of-the-art AI Cells - Excel add-in.

This is an Artificial Intelligence add-in, which is powered by the latest AI Python technologies. AI Cells adds new functions to your Excel for defining probability distributions and analyzing output results.

## Features AIE PPA Credit Risk Tool

- ⇒ For all PPA contract types and pricing structures
- ⇒ Excel Add-In with AI power
- ⇒ Monte Carlo Simulations
- ⇒ Forward Price Curve Builder
- ⇒ Forward Generation Curve Builder
- ⇒ Credit Risk Valuation

Z-SCORE Calculations						
XYZ Company						
	Y-5	Y-4	Y-3	Y-2	Y-1	Y0
Total Current Assets	11633	11314	16330	15179	15064	16130
Total Current Liabilities	15892	14847	19793	18334	21256	22938
Working Capital	-4259	-3533	-3463	-3155	-6192	-6808
Total Asstest	114013	112559	130992	128598	135965	141890
6.56 X1	-4%	-3%	-3%	-2%	-5%	-5%
Retained Earnings	2637	2853	3318	3428	3784	3157
3.26 X2	2%	3%	3%	3%	3%	2%
Pre-Tax Income	3253	4091	2397	4946	5326	5556
Interest Expense	-1079	-966	-1088	-1184	-1160	-932
Earnings Before Interest and taxes	4332	5057	3485	6130	6486	6488
6.72 X3	4%	4%	3%	5%	5%	5%
Total Liabilities	69398	69640	80420	78568	83527	89666
Book Value of Equity	44615	42919	50572	50030	52438	52224
1.05 X4	0.64	0.62	0.63	0.64	0.63	0.58
3.25 Altman Z-score Non Manufacturing	4.0	4.1	4.0	4.2	4.0	3.9
Altman Z-score risk-ranges	Safe Zone					

S&P Default Rates by Original Rating											
	Years										
	1	2	3	4	5	6	7	8	9	10	
AAA	0.00%	0.00%	0.00%	0.00%	0.01%	0.03%	0.04%	0.04%	0.04%	0.04%	
AA	0.00%	0.00%	0.20%	0.26%	0.28%	0.29%	0.30%	0.31%	0.33%	0.34%	
A	0.01%	0.04%	0.15%	0.27%	0.36%	0.41%	0.43%	0.67%	0.74%	0.78%	
BBB	0.32%	2.65%	3.86%	4.80%	5.27%	5.48%	5.71%	5.86%	6.02%	6.33%	
BB	0.92%	2.94%	6.68%	8.50%	10.71%	12.11%	13.37%	14.32%	15.53%	18.16%	
B	2.86%	10.31%	17.29%	23.70%	28.00%	31.29%	33.76%	35.12%	36.24%	36.72%	
CCC	8.11%	19.50%	33.79%	44.55%	47.27%	53.40%	55.91%	58.01%	58.28%	60.05%	

Renewable Production Profile							
Month	2020	2019	2018	Min	Max	Long term average	Maximum Deviation in the last 3 years
January	63%	79%	70%	63%	79%	78%	15%
February	62%	56%	70%	56%	70%	76%	20%
March	76%	63%	100%	63%	100%	74%	26%
April	50%	64%	59%	50%	64%	66%	16%
May	55%	64%	46%	46%	64%	62%	16%
June	45%	44%	39%	39%	45%	55%	16%
July	53%	43%	34%	34%	53%	47%	13%
August	46%	37%	44%	37%	46%	45%	8%
September	55%	52%	33%	33%	55%	51%	18%
October	78%	49%	60%	49%	78%	60%	18%
November	58%	100%	63%	58%	100%	72%	28%
December	100%	72%	60%	60%	100%	76%	24%



	A	B	C	D	E	F	G	H	I
1									
2		<b>Monthly Forward Curve</b>							
3									
4		Date	Power Price BL	Power Price PL	Power Price OP	Year	Month	Day	
5		2019.12.31	35.5	34.37	36.71	2019	12	3	
6		2019.12.30	38.3	41.69	34.87	2019	12	2	
7		2019.12.29	36.7	40.8	32.66	2019	12	1	
8		2019.12.28	31.8	34.12	29.46	2019	12	7	
9		2019.12.27	31.1	34.3	27.88	2019	12	6	
10		2019.12.26	32.7	38.11	27.33	2019	12	5	
11		2019.12.25	25.4	33.34	17.48	2019	12	4	
12		2019.12.24	14.2	14.02	14.46	2019	12	3	
13		2019.12.23	21.0	29.67	12.25	2019	12	2	
14		2019.12.22	23.4	33.9	12.90	2019	12	1	
15		2019.12.21	1.9	1.92	1.96	2019	12	7	
16		2019.12.20	2.5	2.38	2.68	2019	12	6	
17		2019.12.19	17.4	23.99	10.87	2019	12	5	
18		2019.12.18	22.7	30.7	14.72	2019	12	4	
19		2019.12.17	38.7	43.54	33.76	2019	12	3	
20		2019.12.16	42.9	48.71	37.07	2019	12	2	
21		2019.12.15	40.3	43.94	36.60	2019	12	1	
22		2019.12.14	26.1	30.6	21.52	2019	12	7	
23		2019.12.13	28.0	30.15	25.91	2019	12	6	
24		2019.12.12	27.2	32.79	21.55	2019	12	5	

## Interested to learn more?

All you have to do is contact us and it would be our pleasure to give a Demo to show you how this tool works and would be beneficial to you and your firm.

## Contact

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