# Solar Lease Pass-Through in ABC
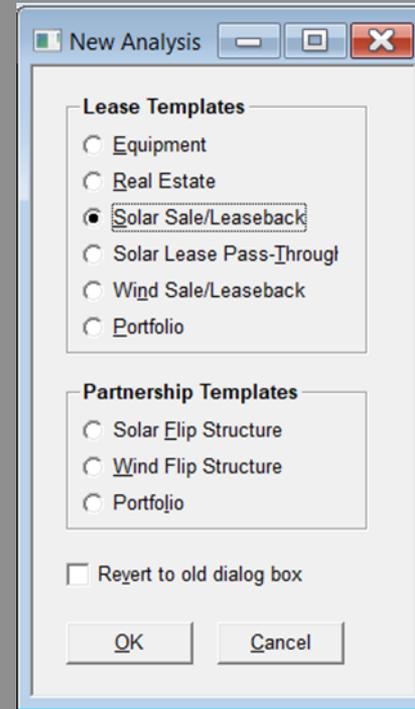
Warren & Selbert

Simple as ABC.

Warren & Selbert's Lease Pass-Through (Inverted Lease) model

# What is ABC?

- Equipment finance **modeling** software

- Used for **optimizing** and **pricing**

  - **Leveraged Leases**

  - **Sale/Leasebacks**

  - **Lease Pass-Throughs**

  - **Partnership flips**

- **Lease Pass-Through**

  - Sale/Leaseback model built on ABC

  - Commonly used in renewable energy finance and project finance

**New Analysis**

**Lease Templates**
- ○ Equipment
- ○ Real Estate
- ● Solar Sale/Leaseback
- ○ Solar Lease Pass-Through
- ○ Wind Sale/Leaseback
- ○ Portfolio

**Partnership Templates**
- ○ Solar Flip Structure
- ○ Wind Flip Structure
- ○ Portfolio

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# Lease Pass-Through Uses

- **Structure** solar and lease pass-through transactions

- **FAS 13** reports

- Lease **portfolios**

- Evaluate **Lessee** and **Lessor** cash and tax flows

# Lease Pass-Through Workflow

**Input** assumptions



**Run** to evaluate inputs



**Output** reports to show results

- **Input project flows**

  - Purchases

  - Depreciation

  - Loans

  - Revenues

  - Expenses

  - Fees

- **Paste** amounts from **Excel**

- Input **Solar** Assumptions

  - Project Term

  - Prepayment Mode

  - Prepayment Limit/Credit Price

- Input **General Lease** Assumptions

  - Lease Term

  - Periodicity

- **Add** and manage project EBITDA

- Set each EBITDA's:

  - **Amounts**

  - **Dates**

  - **Rent Coverage**

  - **Debt Coverage**

**Solar EBITDAs**

| Stream Operations ▼ | Custom Questions ▼ | Process | Optimize |

| **Stream** | **Alias** | **EBITDA** |
|---|---|---|
| 1 | EBITDA | 0.00, 12,000.00, ..., 31,750.00 |

◄ ►

**Solar EBITDA 1**

| Show Fewer Questions | Process | Optimize |

| 305.100 | Alias | EBITDA   ×   ... |
|---|---|---|
| 305.101 | EBITDA Use Editor Window | 0.00<br>12,000.00<br>12,250.00<br>12,500.00<br>12,750.00<br>13,000.00<br>13,250.00<br>13,500.00<br>13,750.00<br>14,000.00<br>14,250.00<br>14,500.00<br>14,750.00<br>15,000.00<br>15,250.00<br>15,500.00<br>15,750.00<br>16,000.00<br>16,250.00<br>16,500.00<br>16,750.00 |
| 305.102 | EBITDA Dates | 1/1/2018, 4/1/2018, ..., 1/1/2038 (Default) |
| 305.103 | Rent Coverage | 1.15 |
| 305.104 | Debt Coverage | 1.25 |

7

# Lessee Assumptions

- Model the **cash** and **tax** flows for the lessee

- **Calculate/Target IRR** for the lessee

- Specify lessee **optimization objective** (e.g., do opt/maxcost)

# 467 Loan Structure

- ABC models a **467 Loan Structure**

- Tracks the **cumulative difference** between cash rent and allocated rent

- Proof report of **allocated rent** and **interest**

**Allocated Rent and Interest Proof Report**

| [1] Year | [2] Cash Rent | [3] Allocated Rent | [4] =[3]-[2] (Prepaid)/ Deferred Rent | [5] Allocated Interest @ 5% | [6] (Prepaid)/ Deferred Balance | [7] =[3]+[5] Allocated Rent and Interest |
|---|---|---|---|---|---|---|
| 2018 | 55,678.67 | 65,954.23 | 10,275.56 | 0.00 | 10,275.56 | 65,954.23 |
| 2019 | 45,652.17 | 65,954.23 | 20,302.05 | 513.78 | 31,091.39 | 66,468.01 |
| 2020 | 49,130.43 | 65,954.23 | 16,823.79 | 1,554.57 | 49,469.76 | 67,508.80 |
| 2021 | 52,608.70 | 65,954.23 | 13,345.53 | 2,473.49 | 65,288.78 | 68,427.72 |
| 2022 | 56,086.96 | 65,954.23 | 9,867.27 | 3,264.44 | 78,420.49 | 69,218.67 |
| 2023 | 59,565.22 | 65,954.23 | 6,389.01 | 3,921.02 | 88,730.52 | 69,875.25 |
| 2024 | 63,043.48 | 65,954.23 | 2,910.75 | 4,436.53 | 96,077.80 | 70,390.75 |
| 2025 | 66,521.74 | 65,954.23 | -567.51 | 4,803.89 | 100,314.18 | 70,758.12 |
| 2026 | 70,000.00 | 65,954.23 | -4,045.77 | 5,015.71 | 101,284.12 | 70,969.94 |
| 2027 | 73,478.26 | 65,954.23 | -7,524.03 | 5,064.21 | 98,824.29 | 71,018.43 |
| 2028 | 76,956.52 | 80,610.72 | 3,654.20 | 4,941.21 | 107,419.71 | 85,551.94 |
| 2029 | 80,434.78 | 80,610.72 | 175.94 | 5,370.99 | 112,966.63 | 85,981.71 |
| 2030 | 83,913.04 | 80,610.72 | -3,302.32 | 5,648.33 | 115,312.65 | 86,259.06 |
| 2031 | 87,391.30 | 80,610.72 | -6,780.58 | 5,765.63 | 114,297.70 | 86,376.36 |
| 2032 | 90,869.57 | 80,610.72 | -10,258.84 | 5,714.88 | 109,753.74 | 86,325.61 |
| 2033 | 94,347.83 | 80,610.72 | -13,737.10 | 5,487.69 | 101,504.33 | 86,098.41 |
| 2034 | 97,826.09 | 80,610.72 | -17,215.36 | 5,075.22 | 89,364.18 | 85,685.94 |
| 2035 | 101,304.35 | 80,610.72 | -20,693.62 | 4,468.21 | 73,138.76 | 85,078.93 |
| 2036 | 104,782.61 | 80,610.72 | -24,171.89 | 3,656.94 | 52,623.82 | 84,267.66 |
| 2037 | 108,260.87 | 80,610.72 | -27,650.15 | 2,631.19 | 27,604.86 | 83,241.91 |
| 2038 | 27,608.70 | 0.00 | -27,608.70 | 3.83 | 0.00 | 3.83 |
| | 1,545,461.28 | 1,465,649.52 | -79,811.75 | 79,811.75 | | 1,545,461.28 |

- **Asset Depreciation** for the lessor

- **Phantom income** for the lessee

  - Equal to ITC over the owner's depreciable life

- **Phantom depreciation** if the asset were to be bought or retained

- **Run** ABC using linear optimization

- Choose an **Objective** such as:

  - Min PV

  - Min Cash Rent

  - Max Yield

  - CALC Expression (Custom Objective – e.g., Min Prepayment)

- Input **Constraints** in order to…

  - Maintain coverage ratios

  - Limit the prepayment

  - Meet lessee requirements
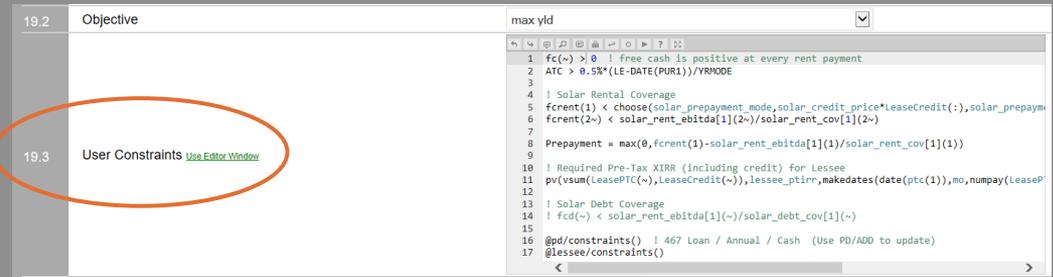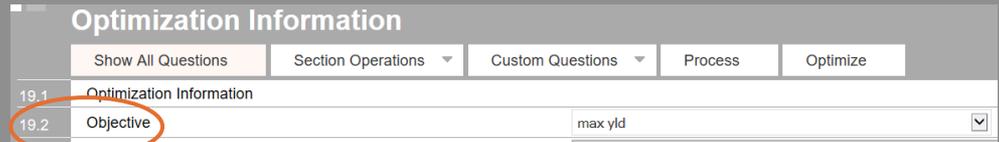
# Reports

- ABC offers a number of **reports** including:

  - Yield Proof

  - Cash Detail

  - Tax Detail

  - FAS 13 Accounting

  - Termination Values

- Create **custom** reports

- **View** reports within ABC

- **Save** reports as an **Excel** or **PDF** file

**Report List**

Find Report

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Reports available:

| Report | Description |
|--------|-------------|
| 1 | Summary Report |
| 2 | Yield Proof |
| 3 | Statement of Cash Flow |
| 4 | Statement of State Tax Liability |
| 5 | Statement of Federal Tax Liability |
| 6 | IRS Tests (Revenue Procedure 75-28 or Sec |
| 7 | FAS 13 Accounting |
| 8 | FAS Classification Test |
| 9 | Termination or Stipulated Loss |
| 10 | Revenue Stream Schedule |

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# Report Samples

**FAS 13 Accounting Report**

**Statements of Earnings in Accordance with FASB Accounting Standard No. 13**
with 0 Days of Income Allocated to the First Month

| Year Ending | Lessor's Net Investment At End of Year | Total Cash Flow | Pre-Tax Cash Flow Allocated to Investment | Pre-Tax Income Allocated @ 9.49812% | Pre-Tax Income w/o IDC | Amortized IDC | Tax Effect of Pre-Tax Income | Investment Tax Credit | After-Tax Income |
|---|---|---|---|---|---|---|---|---|---|
| Dec 2018 | 664,744 | -608,043 | -24,744 | 56,700 | 56,700 | 0 | -19,845 | 0 | 36,855 |
| Dec 2019 | 682,662 | 45,652 | -17,918 | 63,570 | 63,570 | 0 | -22,250 | 0 | 41,321 |
| Dec 2020 | 698,696 | 49,130 | -16,034 | 65,164 | 65,164 | 0 | -22,807 | 0 | 42,357 |
| Dec 2021 | 712,658 | 52,609 | -13,962 | 66,571 | 66,571 | 0 | -23,300 | 0 | 43,271 |
| Dec 2022 | 724,343 | 56,087 | -11,685 | 67,772 | 67,772 | 0 | -23,720 | 0 | 44,052 |
| Dec 2023 | 733,526 | 59,565 | -9,182 | 68,748 | 68,748 | 0 | -24,062 | 0 | 44,686 |
| Dec 2024 | 739,957 | 63,043 | -6,431 | 69,475 | 69,475 | 0 | -24,316 | 0 | 45,158 |
| Dec 2025 | 743,364 | 66,522 | -3,407 | 69,929 | 69,929 | 0 | -24,475 | 0 | 45,454 |
| Dec 2026 | 737,678 | 75,655 | 5,685 | 69,969 | 69,969 | 0 | -24,489 | 0 | 45,480 |
| Dec 2027 | 721,933 | 84,500 | 15,745 | 68,755 | 68,755 | 0 | -24,064 | 0 | 44,690 |
| Dec 2028 | 700,413 | 88,500 | 21,520 | 66,980 | 66,980 | 0 | -23,443 | 0 | 43,537 |
| Dec 2029 | 672,546 | 92,500 | 27,867 | 64,633 | 64,633 | 0 | -22,622 | 0 | 42,012 |
| Dec 2030 | 637,703 | 96,500 | 34,844 | 61,656 | 61,656 | 0 | -21,580 | 0 | 40,077 |
| Dec 2031 | 595,190 | 100,500 | 42,513 | 57,987 | 57,987 | 0 | -20,295 | 0 | 37,692 |
| Dec 2032 | 544,246 | 104,500 | 50,943 | 53,557 | 53,557 | 0 | -18,745 | 0 | 34,812 |
| Dec 2033 | 484,036 | 108,500 | 60,210 | 48,290 | 48,290 | 0 | -16,902 | 0 | 31,389 |
| Dec 2034 | 413,640 | 112,500 | 70,396 | 42,104 | 42,104 | 0 | -14,736 | 0 | 27,367 |
| Dec 2035 | 332,047 | 116,500 | 81,593 | 34,907 | 34,907 | 0 | -12,217 | 0 | 22,689 |
| Dec 2036 | 238,146 | 120,500 | 93,901 | 26,599 | 26,599 | 0 | -9,310 | 0 | 17,289 |
| Dec 2037 | 130,715 | 124,500 | 107,431 | 17,069 | 17,069 | 0 | -5,974 | 0 | 11,095 |
| Dec 2038 | 0 | 131,750 | 130,715 | 1,035 | 1,035 | 0 | -362 | 0 | 673 |
| Totals | | 1,141,470 | 640,000 | 1,141,470 | 1,141,470 | 0 | -399,515 | 0 | 741,956 |

**Detailed Statement of Cash Flow**

| Period Ending | Purchase 1 | Residual | Lessor EBITDA | Rent | Total Pre-Tax Cash Flow | Federal Tax | After-Tax Cash Flow |
|---|---|---|---|---|---|---|---|
| Dec 30 2018 | -1,000,000.00 | 0.00 | 0.00 | 391,956.52 | -608,043.48 | 148,103.34 | -459,940.14 |
| Dec 30 2019 | 0.00 | 0.00 | 0.00 | 45,652.17 | 45,652.17 | 38,467.75 | 84,119.92 |
| Dec 30 2020 | 0.00 | 0.00 | 0.00 | 49,130.43 | 49,130.43 | 10,950.05 | 60,080.48 |
| Dec 30 2021 | 0.00 | 0.00 | 0.00 | 52,608.70 | 52,608.70 | -5,786.67 | 46,822.03 |
| Dec 30 2022 | 0.00 | 0.00 | 0.00 | 56,086.96 | 56,086.96 | -13,897.54 | 42,189.42 |
| Dec 30 2023 | 0.00 | 0.00 | 0.00 | 59,565.22 | 59,565.22 | -26,916.49 | 32,648.73 |
| Dec 30 2024 | 0.00 | 0.00 | 0.00 | 63,043.48 | 63,043.48 | -39,920.73 | 23,122.75 |
| Dec 30 2025 | 0.00 | 0.00 | 0.00 | 66,521.74 | 66,521.74 | -40,813.50 | 25,708.24 |
| Dec 30 2026 | 0.00 | 0.00 | 60,750.00 | 14,904.79 | 75,654.79 | -21,263.22 | 54,391.56 |
| Dec 30 2027 | 0.00 | 0.00 | 84,500.00 | 0.00 | 84,500.00 | -29,575.00 | 54,925.00 |
| Dec 30 2028 | 0.00 | 0.00 | 88,500.00 | 0.00 | 88,500.00 | -30,975.00 | 57,525.00 |
| Dec 30 2029 | 0.00 | 0.00 | 92,500.00 | 0.00 | 92,500.00 | -32,375.00 | 60,125.00 |
| Dec 30 2030 | 0.00 | 0.00 | 96,500.00 | 0.00 | 96,500.00 | -33,775.00 | 62,725.00 |
| Dec 30 2031 | 0.00 | 0.00 | 100,500.00 | 0.00 | 100,500.00 | -35,175.00 | 65,325.00 |
| Dec 30 2032 | 0.00 | 0.00 | 104,500.00 | 0.00 | 104,500.00 | -36,575.00 | 67,925.00 |
| Dec 30 2033 | 0.00 | 0.00 | 108,500.00 | 0.00 | 108,500.00 | -37,975.00 | 70,525.00 |
| Dec 30 2034 | 0.00 | 0.00 | 112,500.00 | 0.00 | 112,500.00 | -39,375.00 | 73,125.00 |
| Dec 30 2035 | 0.00 | 0.00 | 116,500.00 | 0.00 | 116,500.00 | -40,775.00 | 75,725.00 |
| Dec 30 2036 | 0.00 | 0.00 | 120,500.00 | 0.00 | 120,500.00 | -42,175.00 | 78,325.00 |
| Dec 30 2037 | 0.00 | 0.00 | 124,500.00 | 0.00 | 124,500.00 | -43,575.00 | 80,925.00 |
| Dec 30 2038 | 0.00 | 100,000.00 | 31,750.00 | 0.00 | 131,750.00 | -46,112.50 | 85,637.50 |
| Dec 30 2039 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | -1,000,000.00 | 100,000.00 | 1,242,000.00 | 799,470.01 | 1,141,470.01 | -399,514.50 | 741,955.50 |

**Cash Detail Report**

13

# Technical Details and Support

- ABC runs on Warren & Selbert's **servers** in Santa Barbara

- **Connect** using LINK software

- **Secure** connection

- Comprehensive, swift, unmetered **support**

- Experienced and knowledgeable staff

# Thank You

For any questions or comments, please do not hesitate to contact us

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