

# Subject

QM 530

## Decision Tree

Evaluate spot market

Fixed lease option

↳ contract → first pay 100,000

↳ next period pay spot market

if demand goes up → go for spot market

demand lower than 100 above 100

Pay 100,000

↓  
buy from  
~~spot~~ spot  
market

$100\,000 \times 1.1$

$144\,000 \times 1.22$

$44\,000 \times 1.45$

Flexible lease

↳ pay 10,000 → fixed

↳ pay based on capacity

if above 100,000 → purchase from  
spot market

Onshore or offshore

Solar panel company

Produce in Europe or China

D  $\rightarrow$  solar demand Europe = 600000 Sell  $\rightarrow$  70

Annual demand increase 20%.

Probability increase 0.8

demand increase 20%.

prob decrease 0.2

Build Plant with capacity 120 000

demand inc	prob inc	demand decrease	prob dec
0.2	(0.8)	(0.2	$\times (-0.2)$ )
$0.16 - 0.04$			

$$(0 \times 0.7) + (0 \times (-0.3))$$

$$0.07 - 0.03$$
$$0.04$$

D-Solar Decision