

KazakTech

**Connect the world to make the
sun shine 24 hours a day!**



100+

Years of
Life Experience

—The Valueneers—

Andreas Bachmeier



Mechanical Engineer

**Liked the idea of
Desertec**

Christopher Beckett



Aerospace Engineer

**Dreams of
electrifying air
travel**

Felix Wegner



Automotive Engineer

**Excited about the
electrified mobility
of tomorrow**

Daniela Ziegler



Biophysicist

**Loves finding solutions
and nature**

— Olympic Experience —

News: Last Nuclear and Coal Power Plant Offline

Olympic Anticipation 2024

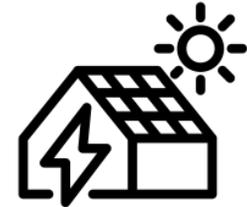
Jack & Jill watch the Olympics @ Jack's Solar powered House

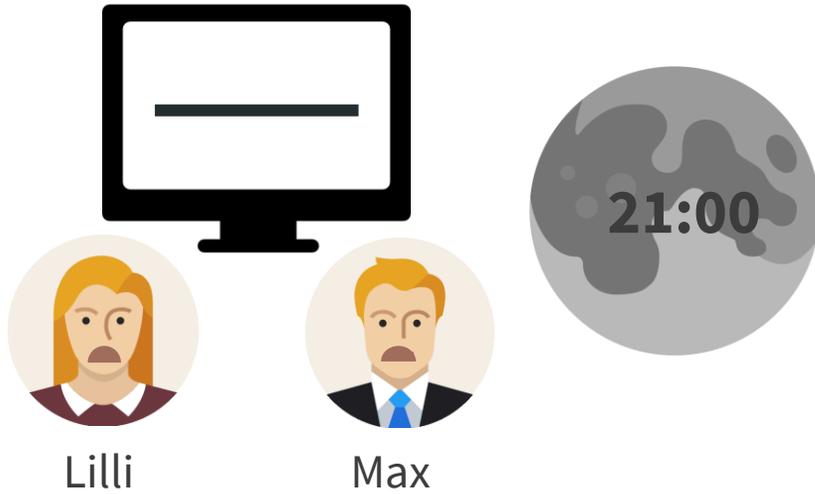


Lilli



Max





Olympic Idea

Jack realizes that the sun was already up in Tokio!
Let's just transfer solar energy to Germany!

Olympic Disappointment

Power Outage as the sun goes down in Germany.



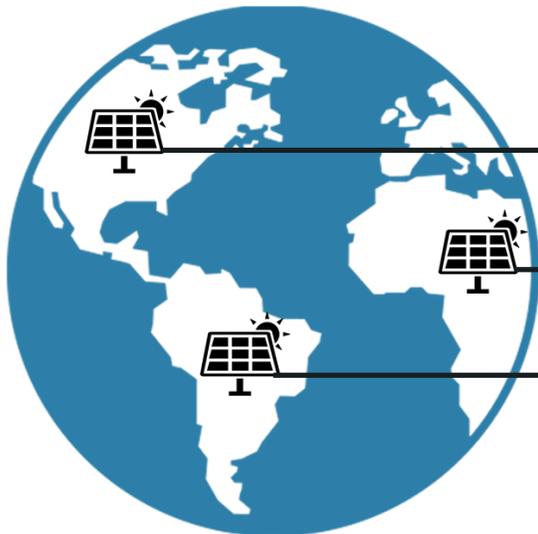
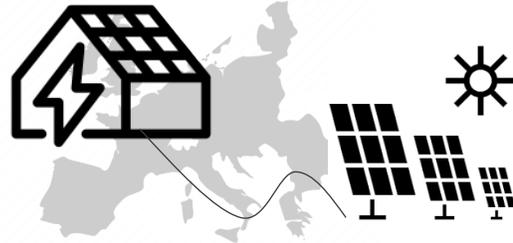
KazakTech



Lilli



Max



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Olympic Vision 2028

Solar Energy around the clock thanks to Goldbeck Solar.

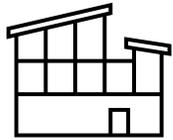
Connect the world to make the sun shine 24 hours a day!



First Step: KazakTech



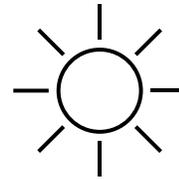
— Motivation —



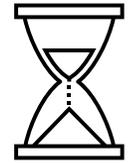
Construction
Experience



Government and
Regulations



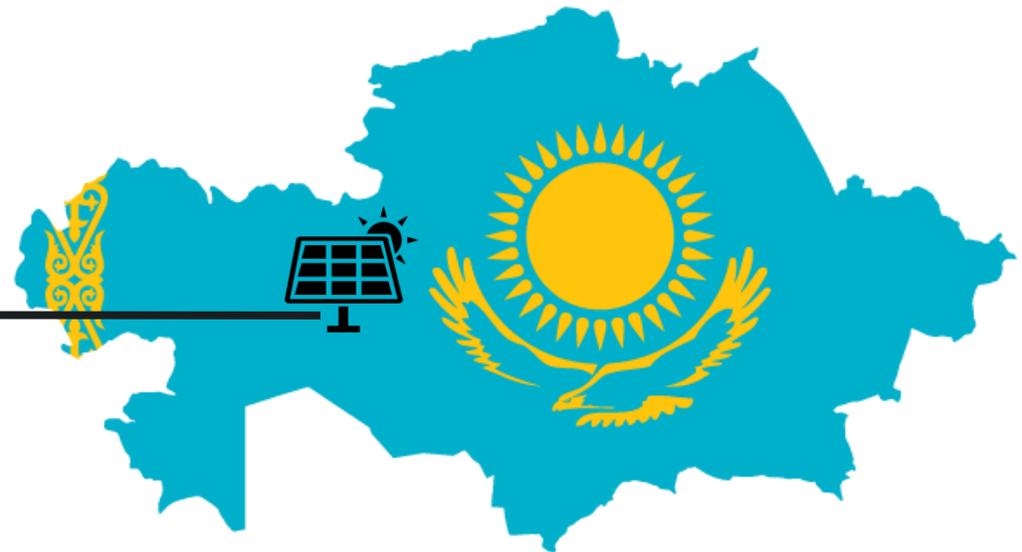
Excellent Climate
Conditions



Advantageous
Time Shift

— Challenge —

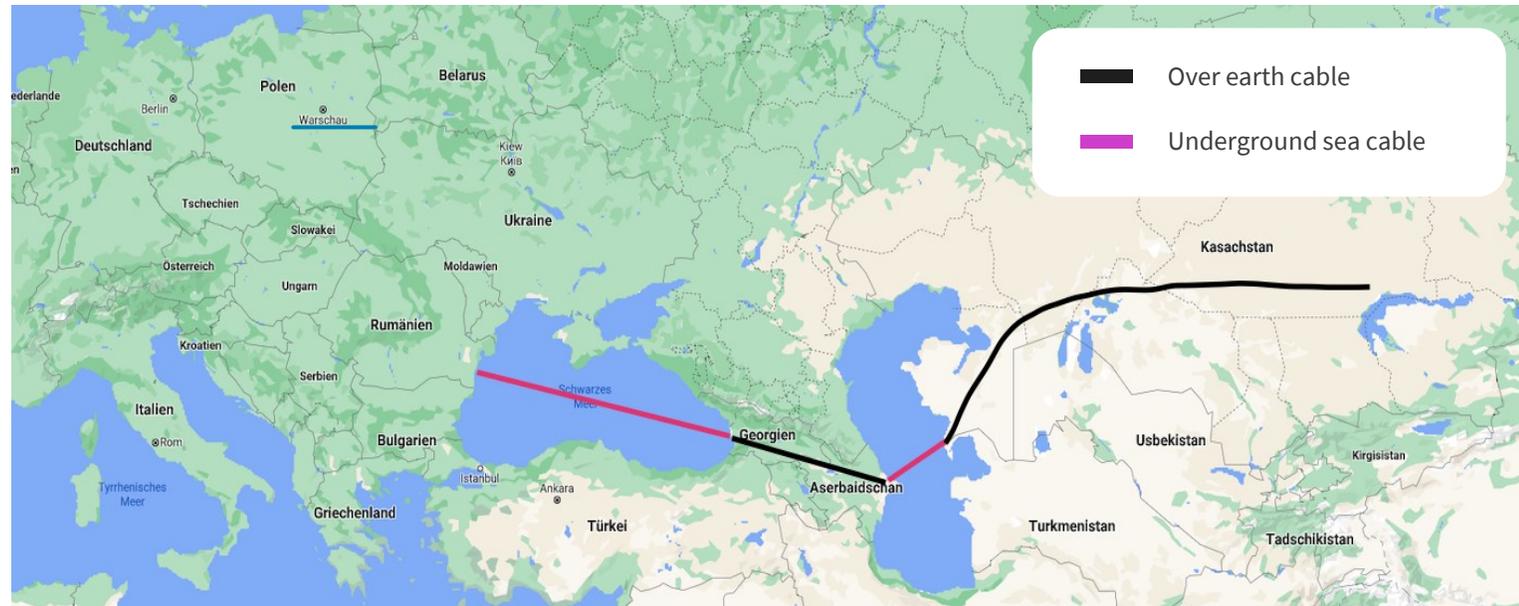
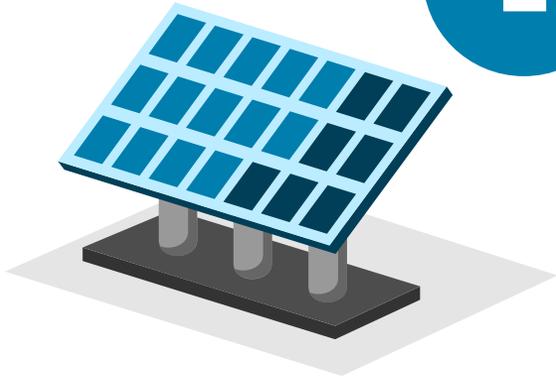
1. Technological: How to transfer energy from Kazakhstan to Germany?
2. Financial: Can this be a successful investment?



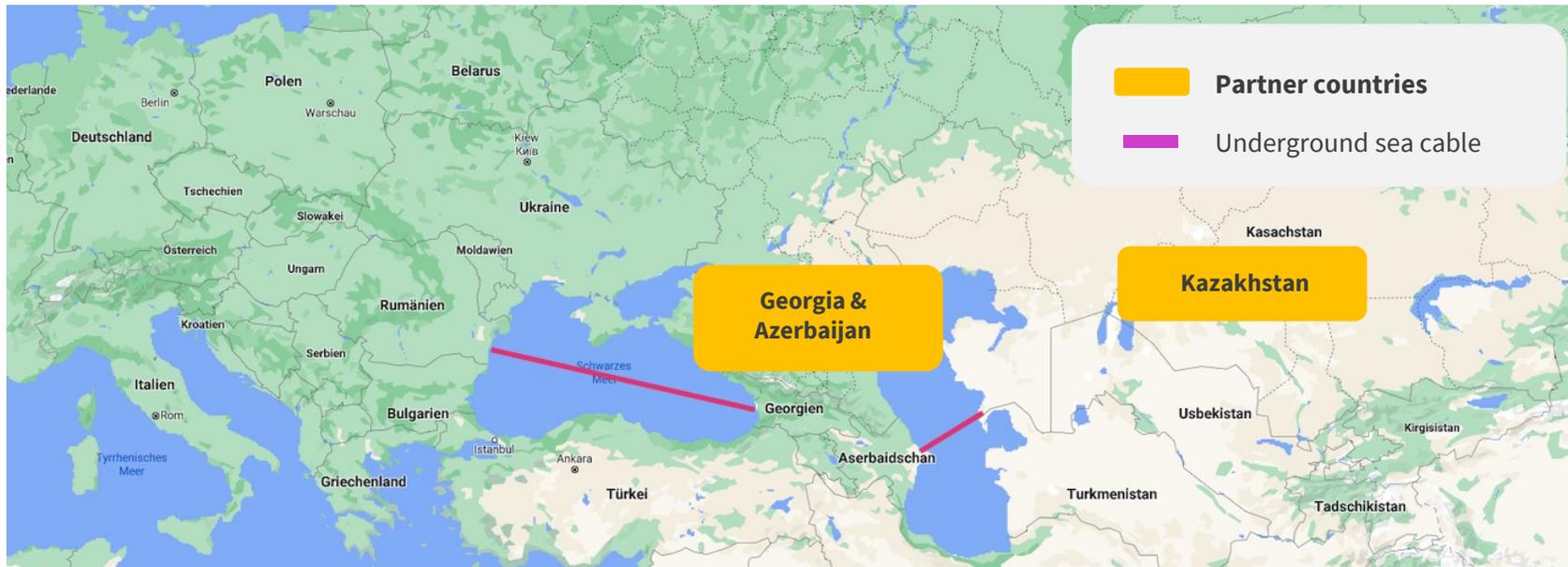
— 2 Scenarios —

1

Build Overland Lines + Sea Cable
→ 2500 km Overland + 1300 km Sea Cable

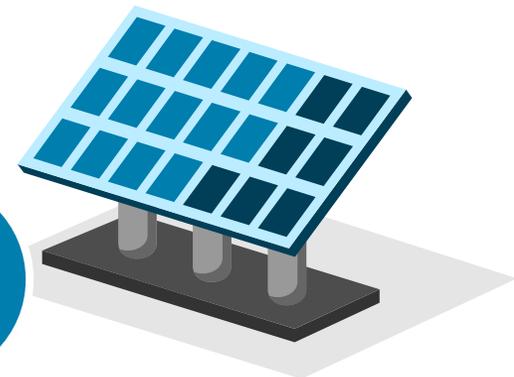


— 2 Scenarios —



Utilize Existing Infrastructure + Build Sea Cable
→ 1300 km Sea Cable + 0.4% of building cost as annual fee

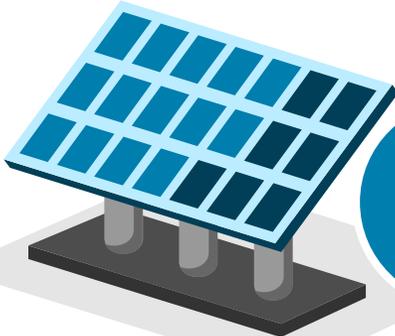
2



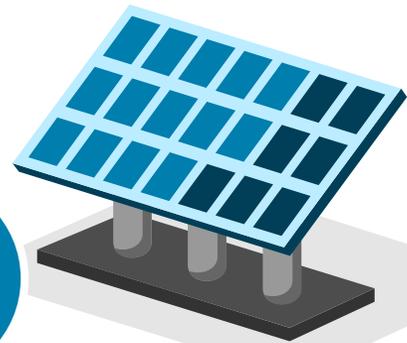
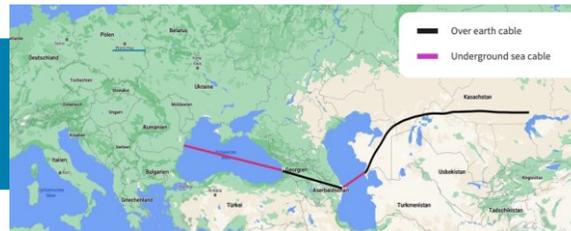
— 2 Scenarios —

Main Assumptions

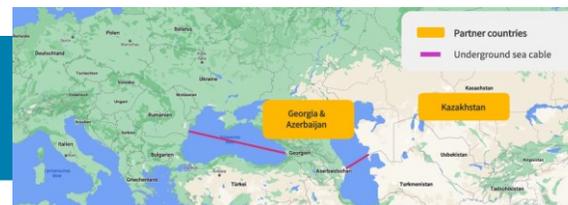
1. Energy revenue 5ct/kWh; Increase of 2%/annum
2. Cable capacity scale down: 70% of peak
3. More cable necessary due to 40% availability
4. Price surcharge of 25% on underwater cables
5. 95% transmission efficiency
6. Neglect of the degradation of the PV system



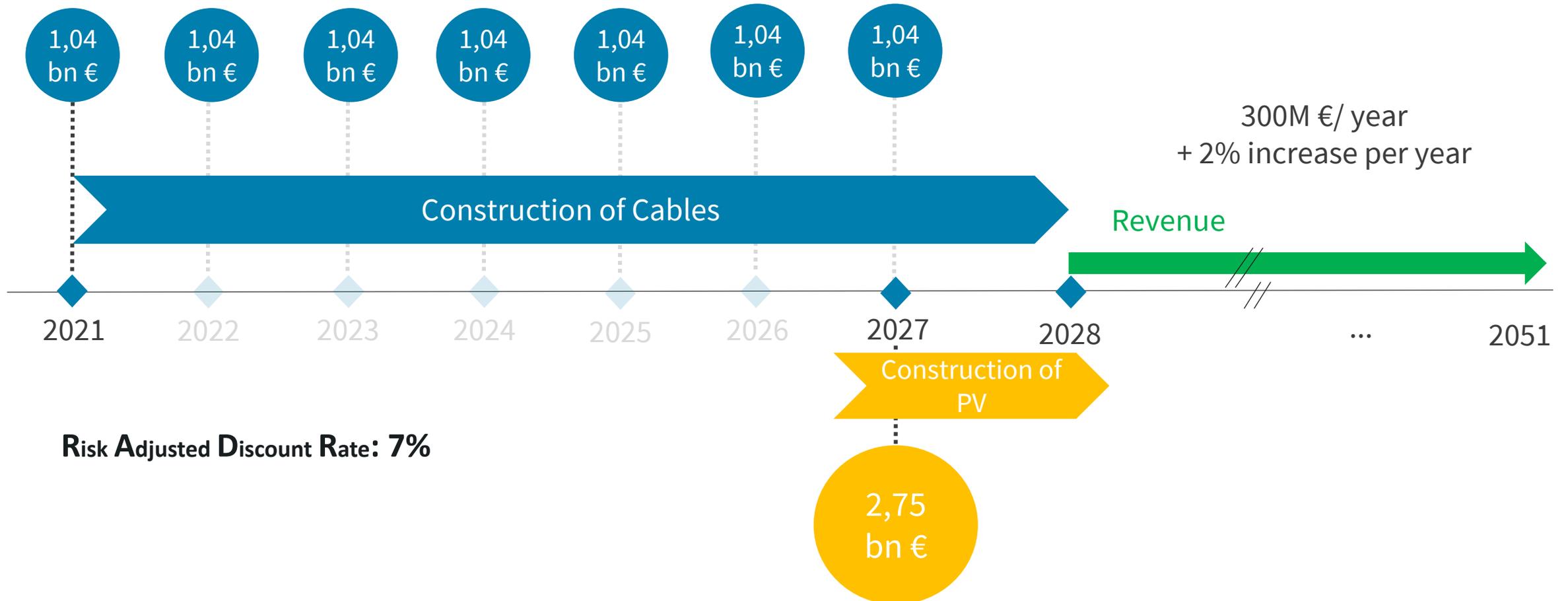
1



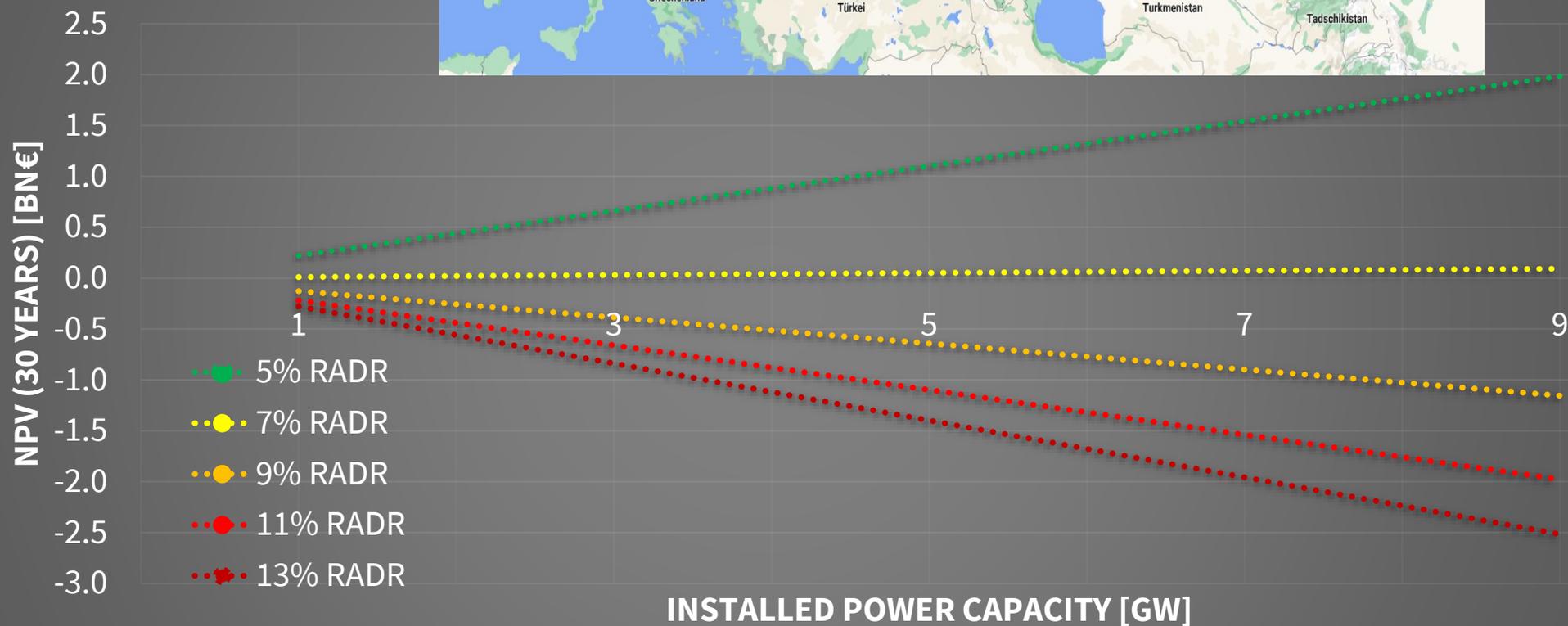
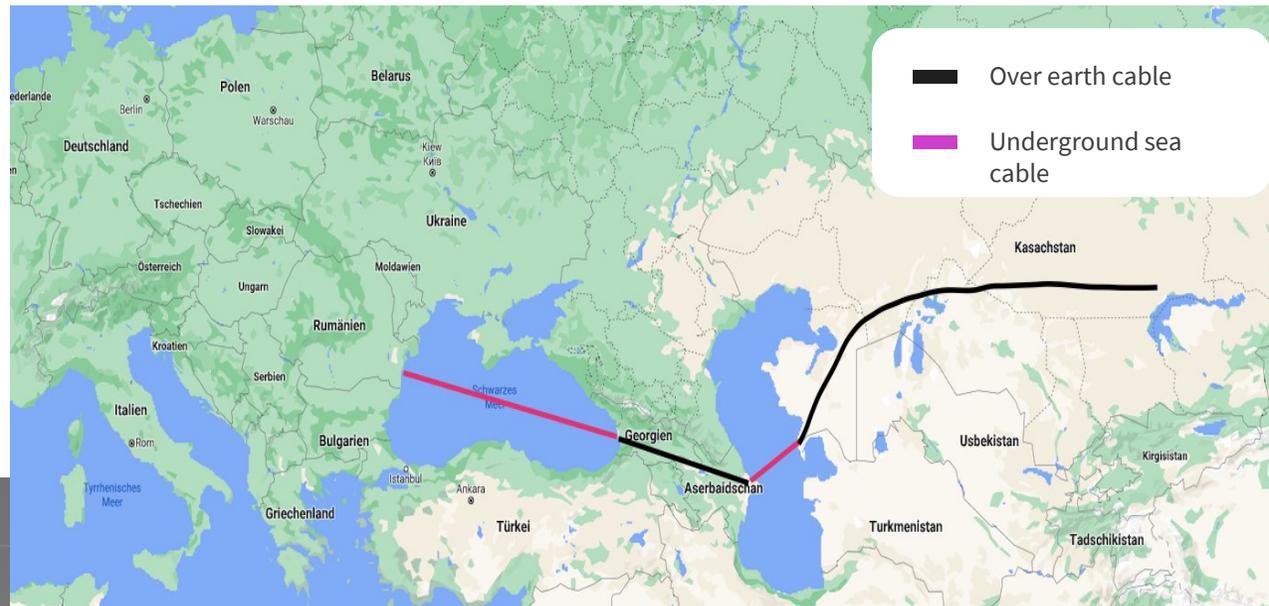
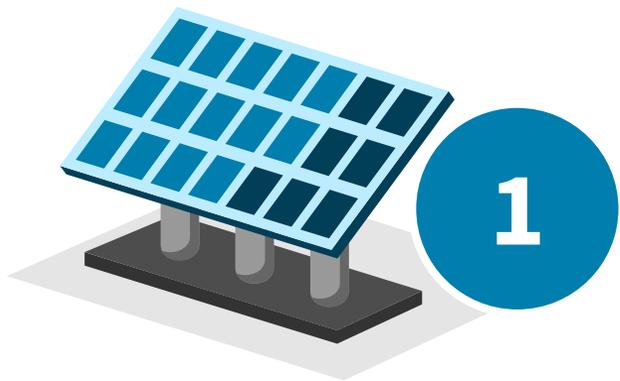
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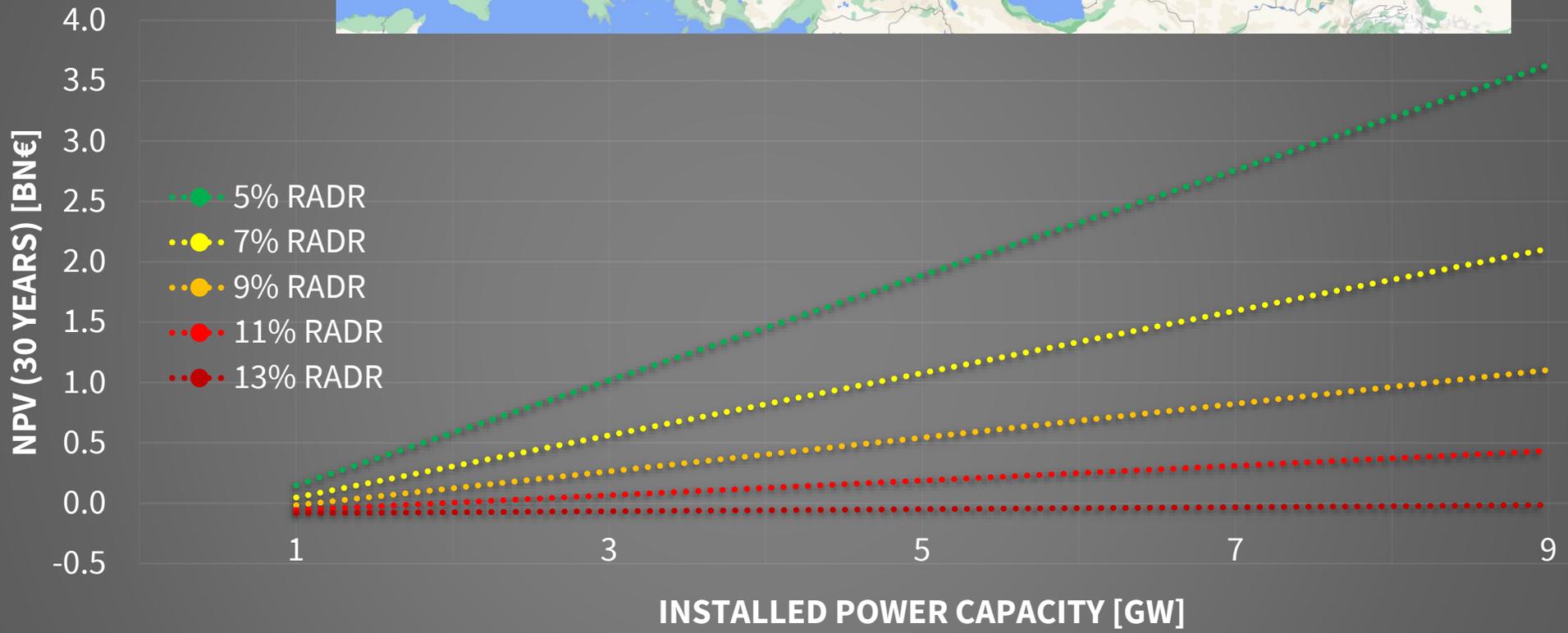
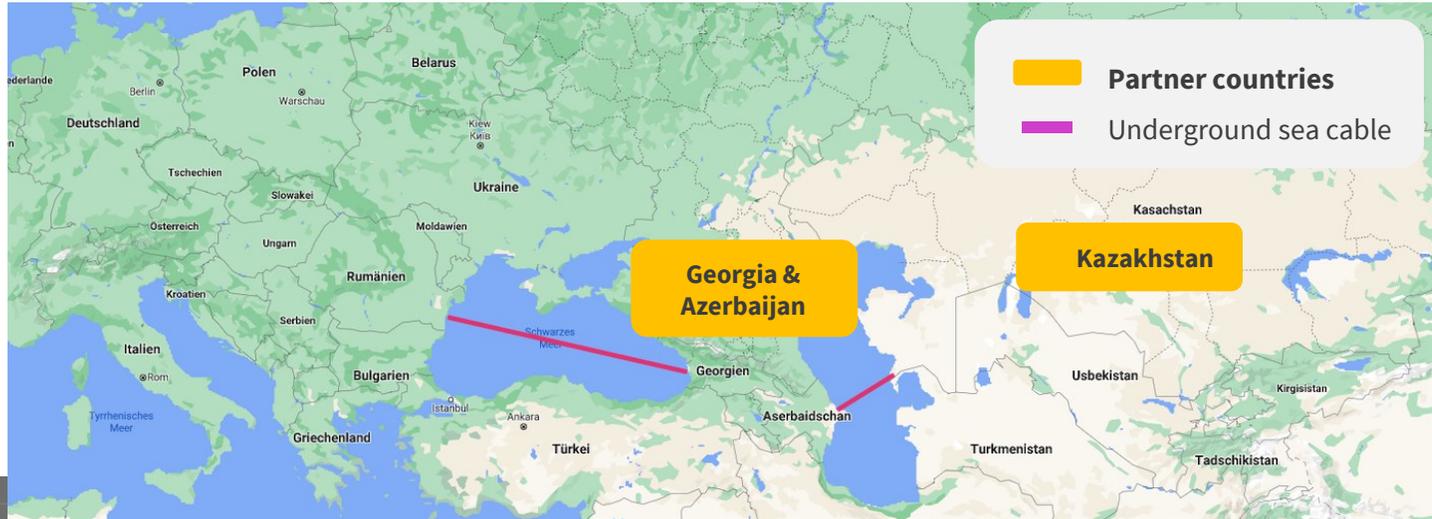
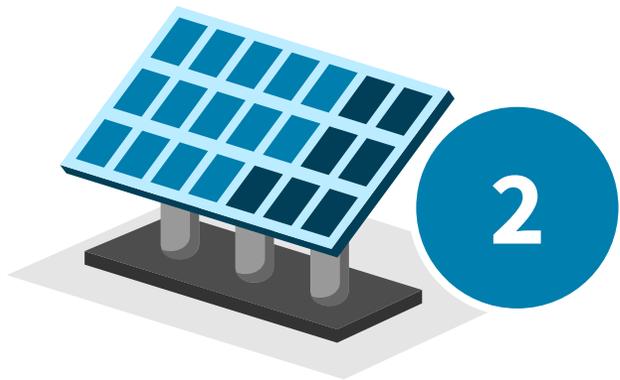


— Base Case —



Risk Adjusted Discount Rate: 7%







KazakTech can work!



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— Result —

Involve local Governments and utilize existing infrastructure (only build sea cables)

Usage of Batteries too expensive → Option for future installation due to price decrease

Low interest rate due to cooperation with EU

NPV (30 years, RADR 7-9%)

1-2 bn €



— Feedback —

Now that Goldbeck Solar made KazakTech work, I'm convinced that the EU governments should support further solar projects for a sustainable future!



Svenja Schulze | Federal Minister for the Environment



— Feedback —

We are proud to be the first company, which proved that importing solar energy is feasible. Now we can continue on our journey to transfer the power of the sun around the world.



Goldbeck Engineer

Solar Energy Expert





Thank You

The Valueneers

