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Utilizing unused renewable energy

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Problem

- Wind power plant power production fluctuates and is weather dependent
- 3.23 billion kilowatthours were restricted in the first quarter of 2019
- Is it possible to store or use this restricted energy?

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Introduction

1. Vehicle to grid
2. Hydrogen as an energy storage system
3. Pumped storage hydropower
4. Power-to-Gas
5. Batteries

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Vehicle to grid

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Hydrogen as an energy storage system

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Pumped storage hydropower

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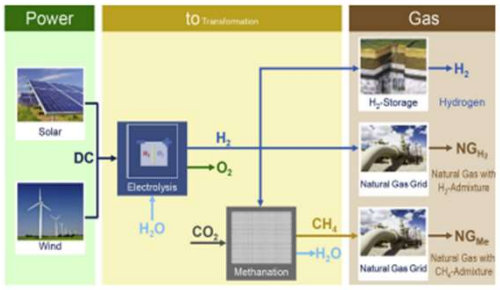
Power-to-Gas



7

Batteries

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Comparision

	Cost	Efficiency	Safety	Scalability	Technical feasibility
Vehicle to grid					
Hydrogen					
Pumped storage hydropower					
Power-to-Gas	- -	+ / -	+ +	+ +	+
Batteries					

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Conclusion

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Recommendations

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