Experiences of operating wind turbines in cold climate and the need for a physical testing

Krister Efverström

100% renewable energy

Skellefteå Kraft

Our wind power plants

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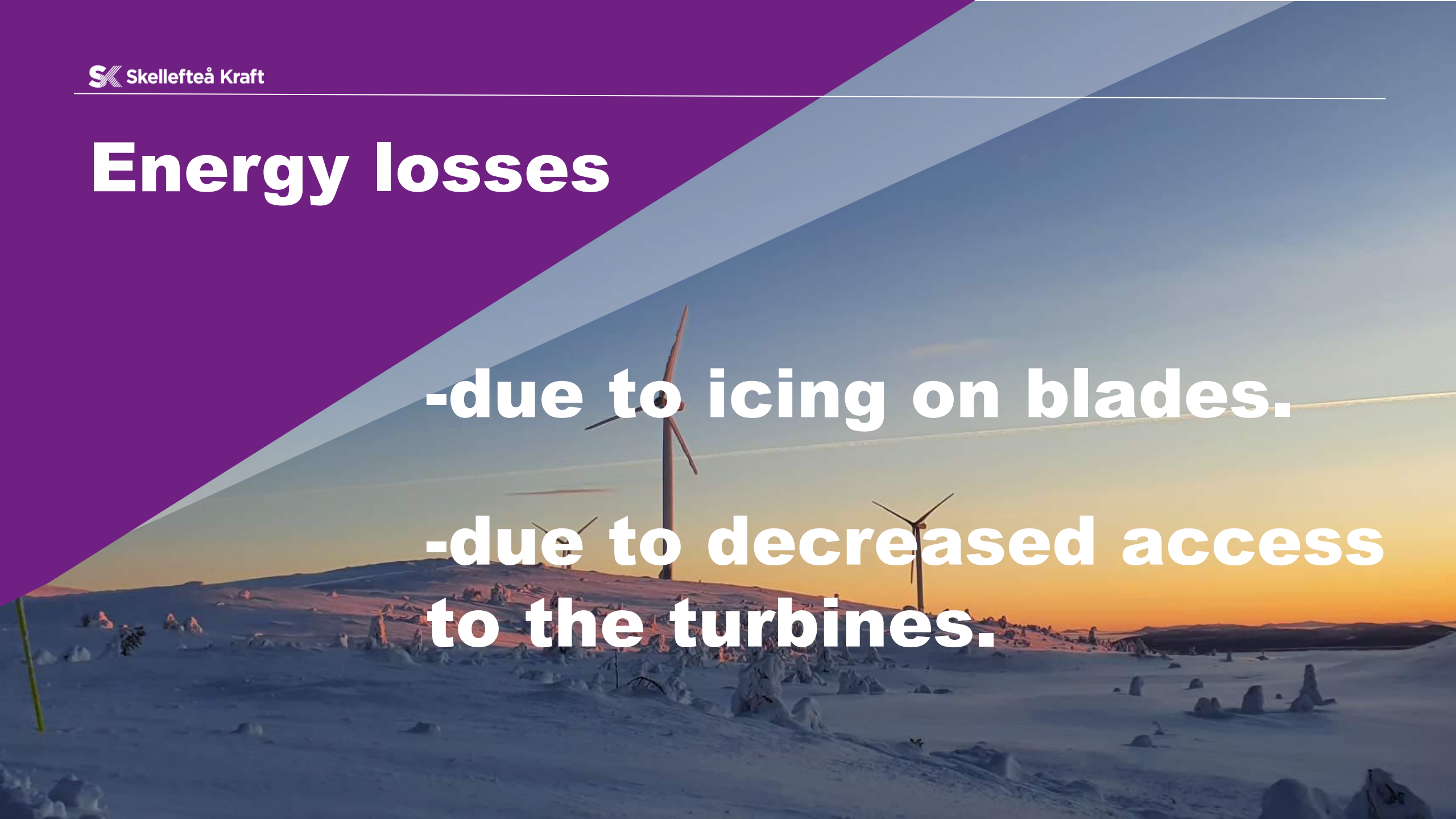
Energy losses



-due to icing on blades.

-due to decreased access to the turbines.

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Cold climate

30% lower access to the turbines during the winter.

Performance losses for 2020-2021 season due to ice on the blades was twice as high as for a normal year.

Performance losses due to ice on the blades (okt-mars).

2015-2016:	(5,7%)
2016-2017:	(6,4%)
2017-2018:	(10,9%)
2020-2021:	(16,3%)

Performance losses due to ice on the blades (okt-mars).

2015-2016:	(6,1%)	(5,7%)
2016-2017:	(4,8%)	(6,4%)
2017-2018:	(15.9%)	(10,9%)
2020-2021:	(34,6%)	(16,3%)

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Test site

Foto: LiLAB

Storumans kommun
LUSPIE

Sollefteå kommun

ÅNS

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VUALTJEREN TJÏELTE

LULEÅ TEKNISKA UNIVERSITET

Inlandets Teknikpark

vindkraft centrum.se

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ARGENTIS

REGION NORRBOTTEN

Piteå kommun

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KROKOMEN TJÏELTE

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Skellefteå Kraft

Thank you for listening

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