

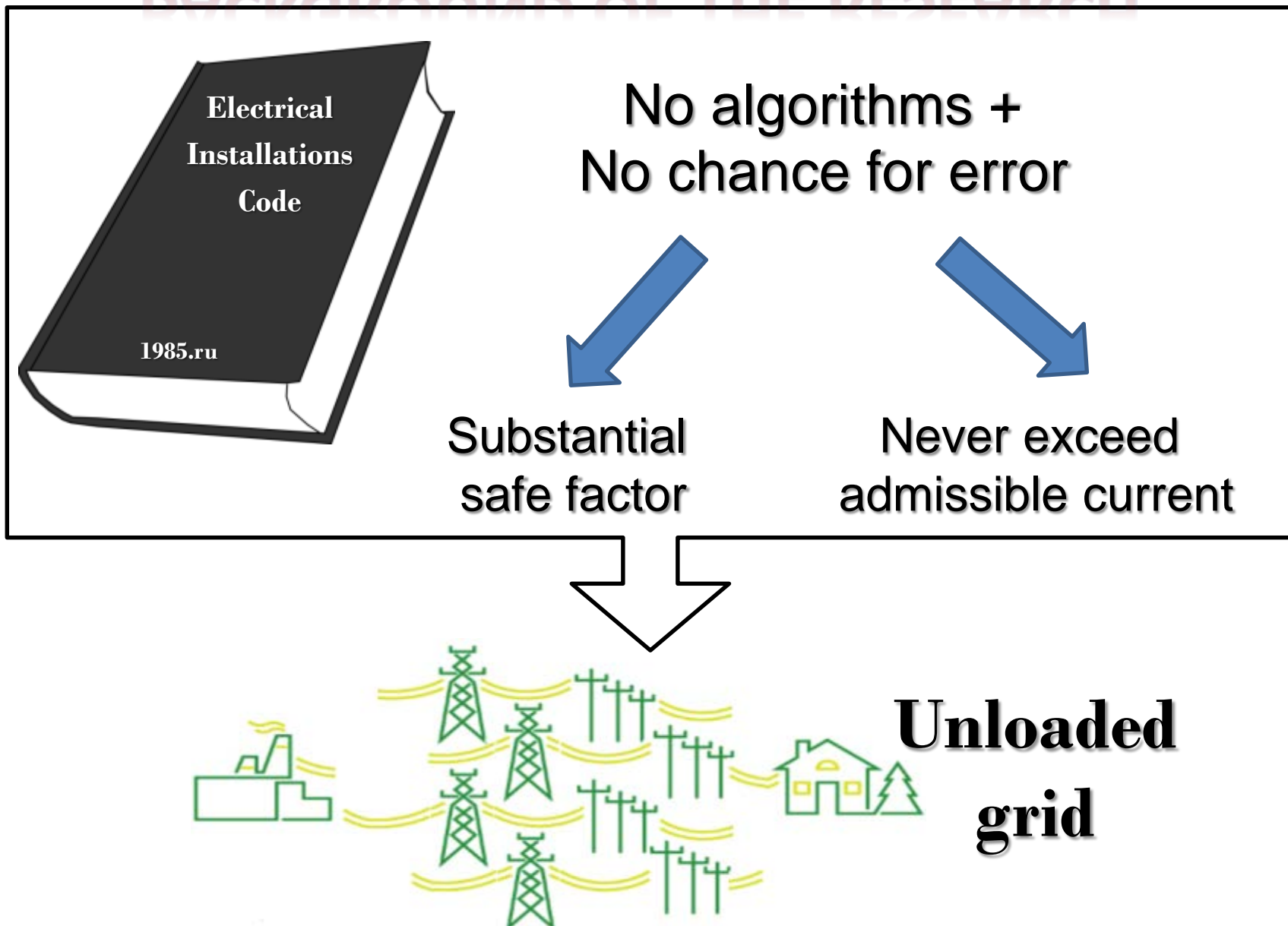
INCREASE OF THE OVERHEAD LINE (OHL) CAPACITY WITHOUT ADDITIONAL CONSTRUCTION

PS 2

Andrey V. LYANZBERG (Russia)

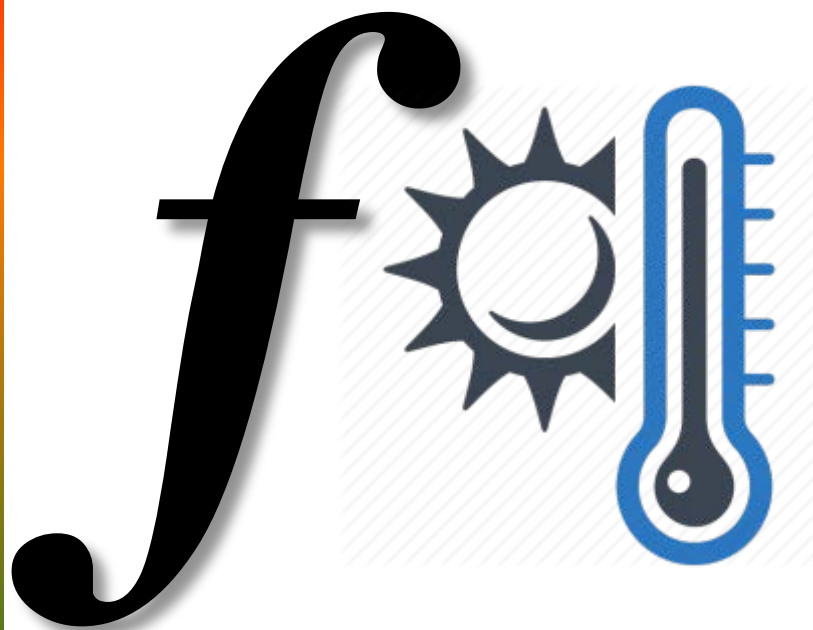


BACKGROUND OF THE RESEARCH



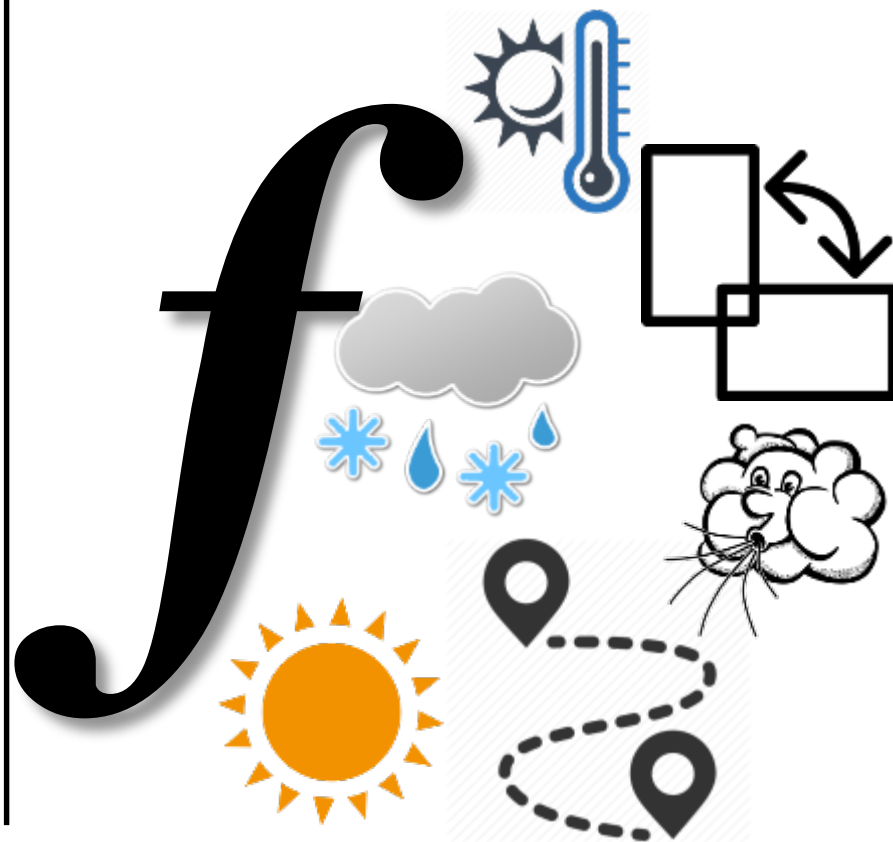
CHANGES IN DETERMINATION OF OHL ADMISSIBLE CAPACITY

Before

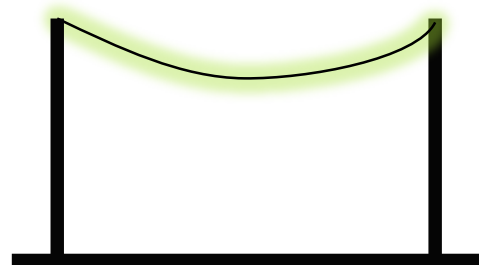


After.

With developed algorithm



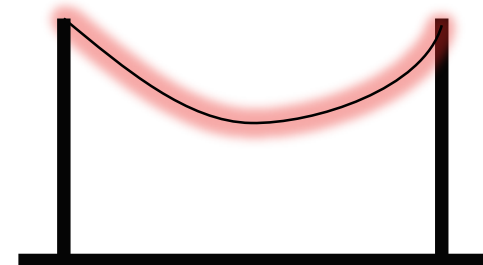
OHL EMERGENCY CAPACITY (NEW)



**Normal
mode**
 $T_{\max} = 70^{\circ}\text{C}$



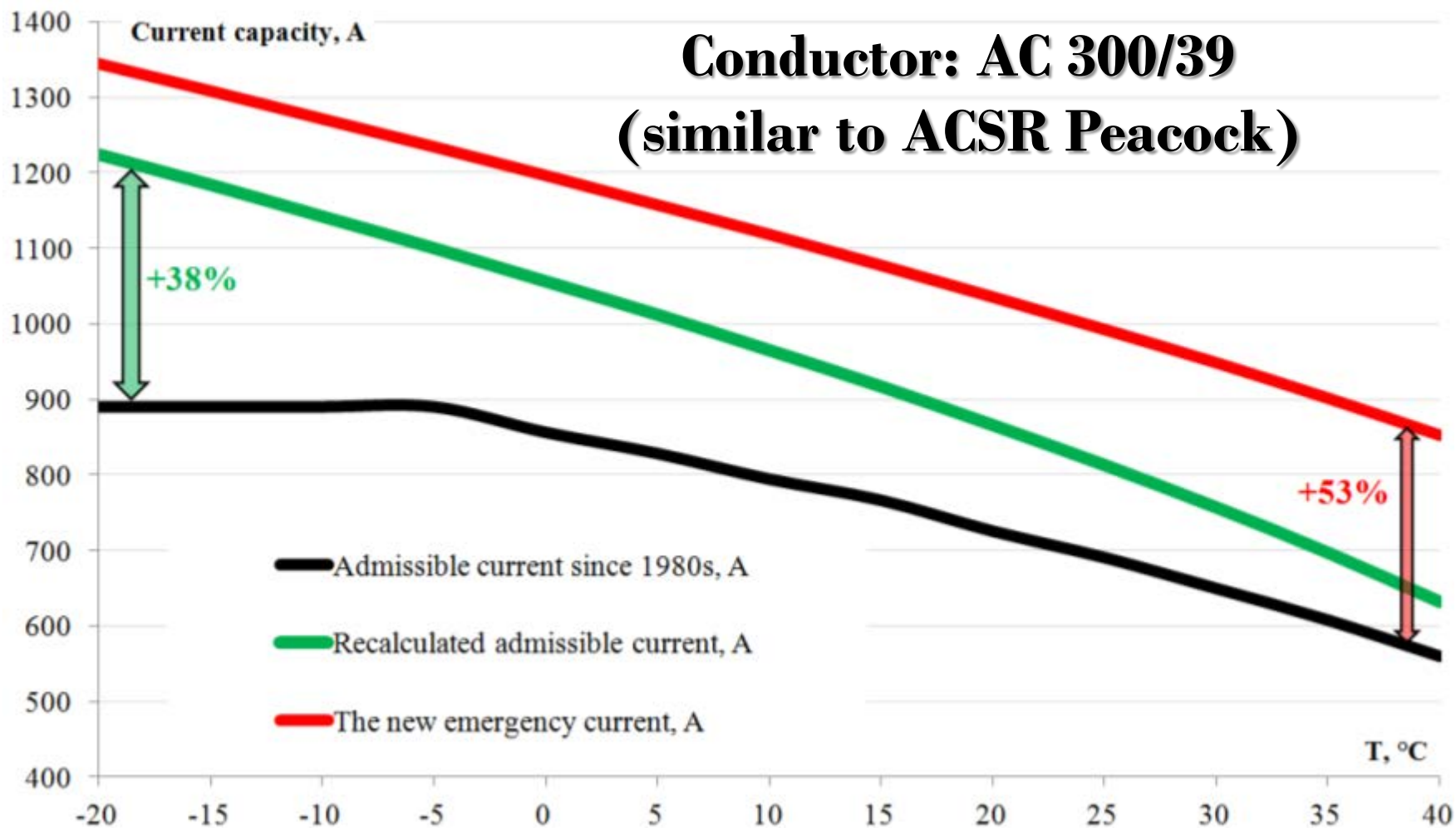
Fault at
bypass
element
and time
for
clearance
 ≤ 20 min.



**Emergency
mode**
 $T_{\max} = 90^{\circ}\text{C}$

EXAMPLE OF OHL CAPACITY INCREASING

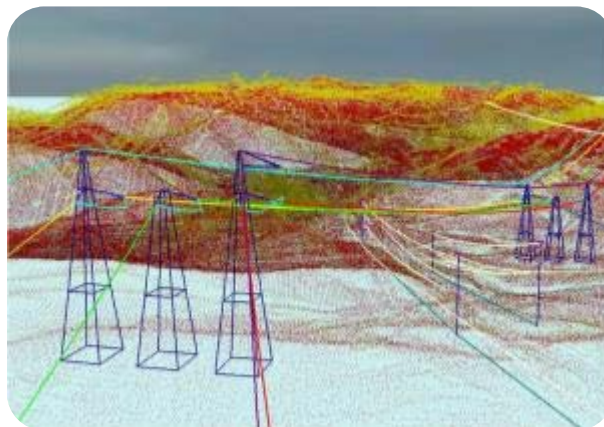
**Conductor: AC 300/39
(similar to ACSR Peacock)**



THE COST OF CAPACITY INCREASING

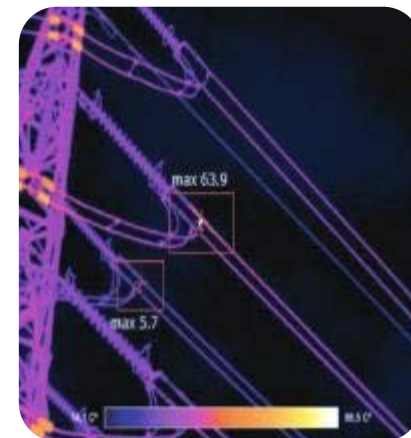


Total
price of
OHL
capacity
increasing



Measuring the
overall distance
between a conductor
and ground

Contact joint
(conductor-
insulator) heat
monitoring



Calculating

RESULTS & FUTURE TRENDS



Decreasing CapEx for building new OHL



Automatic protection devices removing



No OHL faults caused or related to application of the recalculated overload capacities



Researches on the substation equipment (CT, circuit breakers, high frequency line trap, etc.) current capacity have to be initiated

THANK YOU FOR YOUR ATTENTION!

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