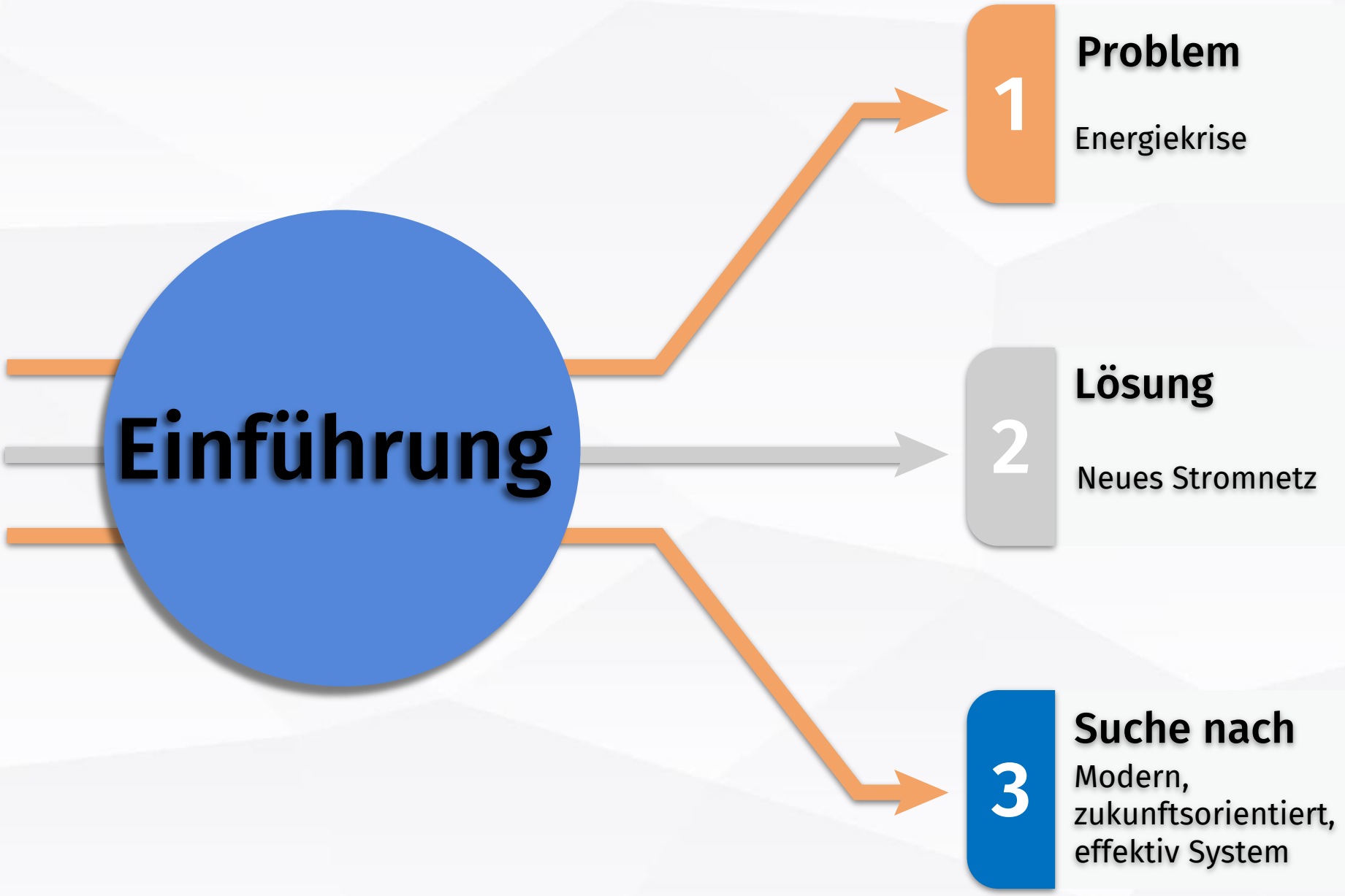
Forschungs-auftrag


Einführung
1
Problem
Energiekrise
2
Lösung
Neues Stromnetz
3
Suche nach
Modern, zukunftsorientiert, effektiv System

01 Smart Grid

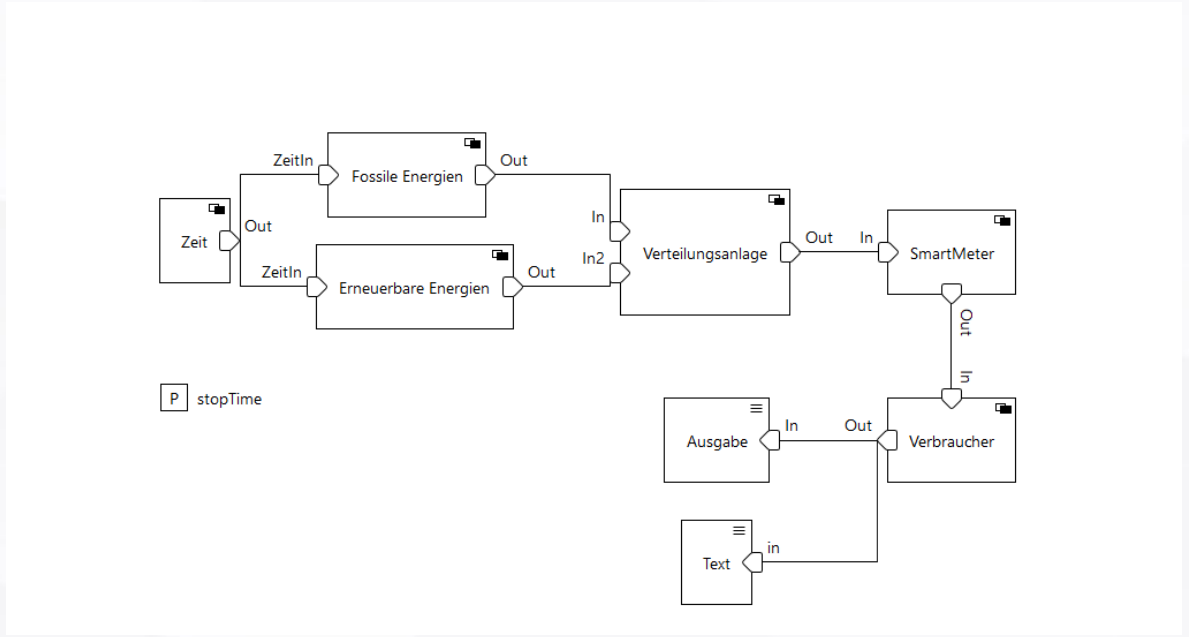
- intelligentes Stromnetz
- zukunftsorientiertes Modell
- zurzeit: klare Trennung zwischen Verbraucher und Erzeuger
- Smart-Grid: Verbraucher fungieren als Erzeuger und umgekehrt
- Einspeisen von Strom über Solaranlagen/E-Autos in Stromnetz
- Spannungsschwankungen können so ausgeglichen werden

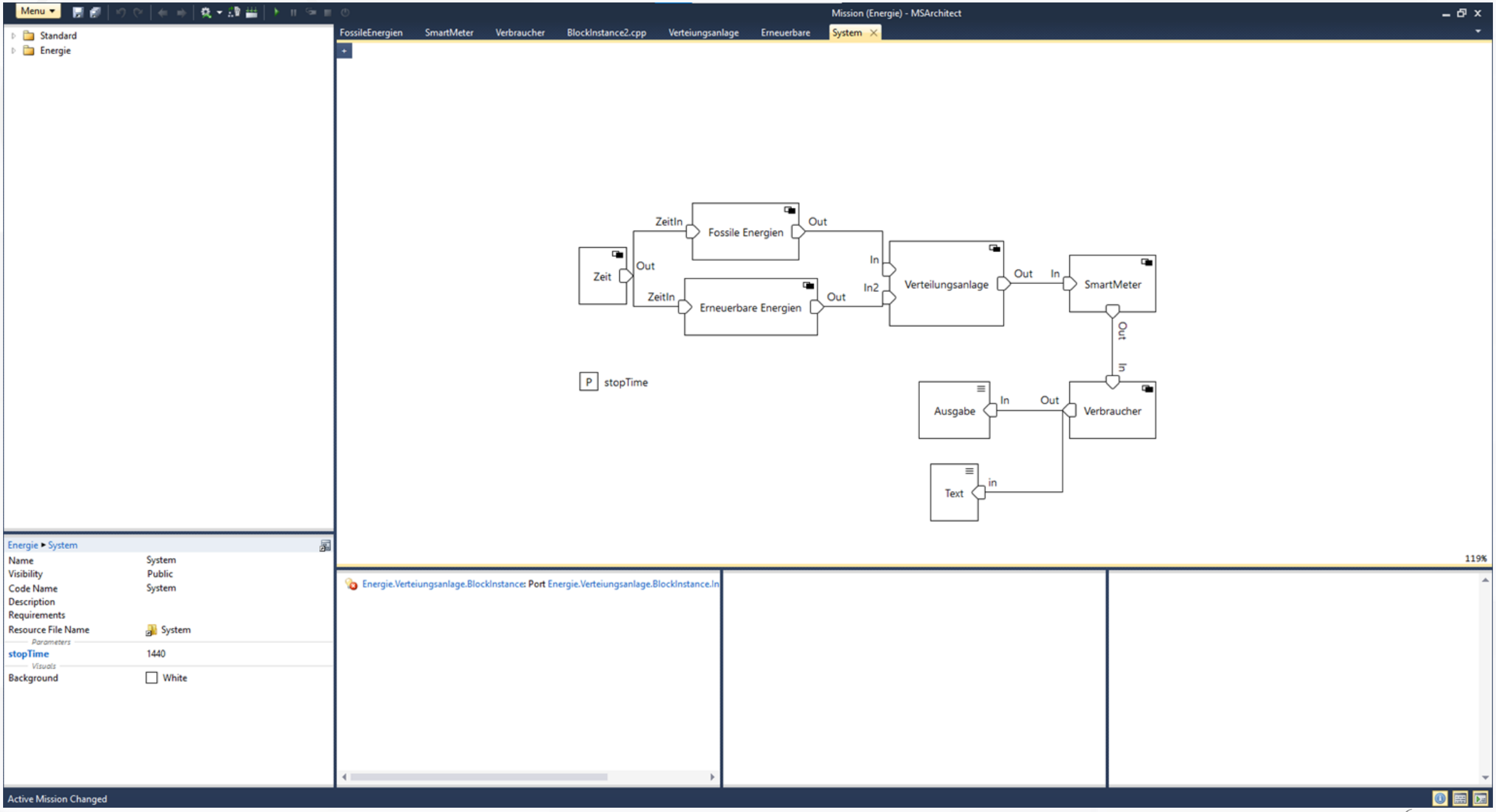
02 Smart Grid

- Mit modernster Automatisierungstechnologie Vorfälle erkennen und Stromfluss umleiten
- große Anzahl erneuerbarer Energie nötig + Überwachungssysteme
- => automatisiertes, intelligentes und dezentrales Stromnetz

03 Smart Grid

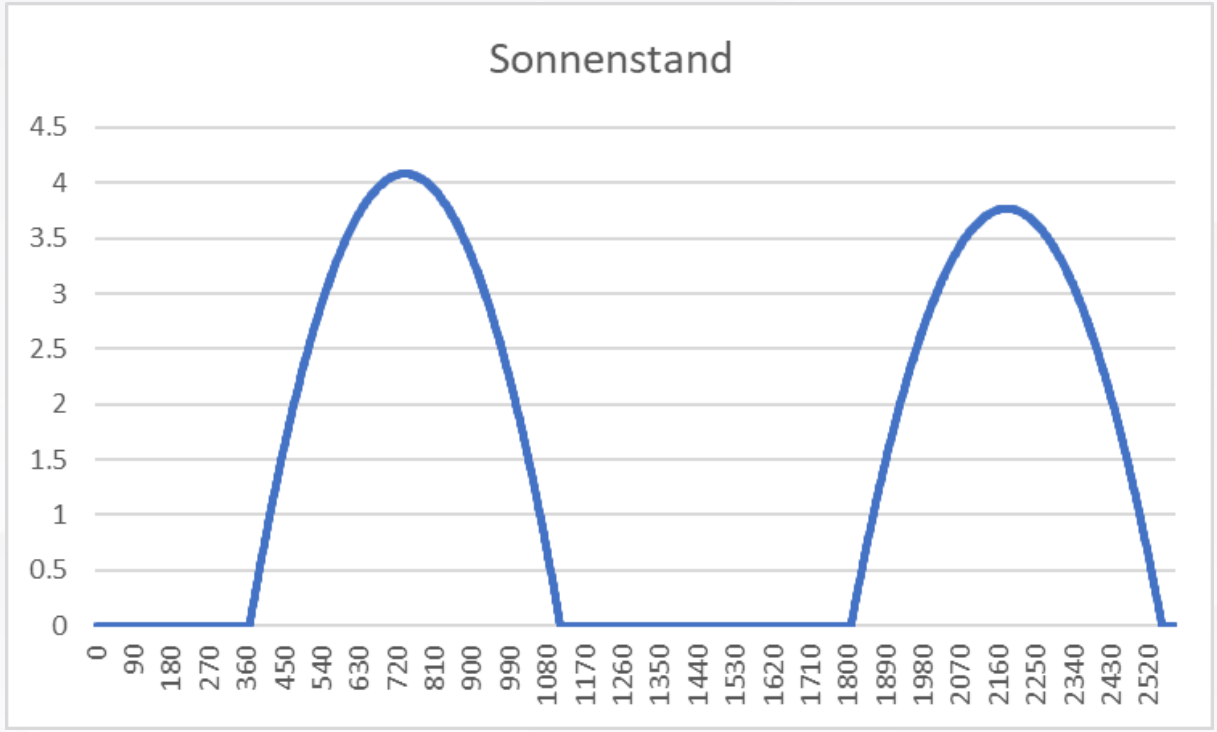
- Ziel: Smart Grid Simulieren und Stromkosten erhalten
- Simulation: MS Architect




Menu
Mission (Energie) - MSArchitect
Standard
Energie
FossileEnergien
SmartMeter
Verbraucher
BlockInstance2.cpp
Verteiungsanlage
Erneuerbare
System
ZeitIn
Fossile Energien
Out
Zeit
Out
ZeitIn
Erneuerbare Energien
Out
In
In2
Verteilungsanlage
Out
In
SmartMeter
Out
In
P
stopTime
Ausgabe
In
Out
Verbraucher
Text
in
119%
Energie ▸ System
Name
System
Visibility
Public
Code Name
System
Description
Requirements
Resource File Name
System
Parameters
stopTime
1440
Visuals
Background
White
Energie.Verteiungsanlage.BlockInstance: Port Energie.Verteiungsanlage.BlockInstance.In
Active Mission Changed

03 Smart Grid

- Bisher Simulation aller Energieträger Bezug auf Deutschland



Zeit(min)	Erdgas(MiokW/h)	Kohle(MiokW/h)	Wasser(MiokW/h)	Wind(MiokW/h)	Solar(MiokW/h)	Verhältnis(EE/Gesamt in %)	Preis(€/ kW/h)
0	3.2	6.18	1	3.6129	0	32.966	1.92367
1	3.2	6.18	1	9.42652	0	52.6419	2.21435
2	3.2	6.18	1	1.95431	0	23.9519	1.84074
3	3.2	6.18	1	6.5824	0	44.7012	2.07214
4	3.2	6.18	1	9.45688	0	52.7143	2.21586
5	3.2	6.18	1	5.91818	0	42.4475	2.03893
6	3.2	6.18	1	4.93567	0	38.7556	1.9898
7	3.2	6.18	1	2.31313	0	26.1017	1.85868
8	3.2	6.18	1	3.32338	0	31.5497	1.90919
9	3.2	6.18	1	7.03252	0	46.1307	2.09465
10	3.2	6.18	1	4.17187	0	35.5409	1.95161
11	3.2	6.18	1	4.67017	0	37.6751	1.97653
12	3.2	6.18	1	6.24648	0	43.584	2.05534
13	3.2	6.18	1	9.18971	0	52.0688	2.20251
14	3.2	6.18	1	8.6291	0	50.6552	2.17447
15	3.2	6.18	1	8.54241	0	50.4291	2.17014
16	3.2	6.18	1	2.06852	0	24.6497	1.84645
17	3.2	6.18	1	4.06989	0	35.086	1.94651
18	3.2	6.18	1	2.47317	0	27.0219	1.86668
19	3.2	6.18	1	0.684986	0	15.2281	1.77727
20	3.2	6.18	1	0.256175	0	11.8104	1.75583
21	3.2	6.18	1	3.57648	0	32.7911	1.92184
22	3.2	6.18	1	6.09693	0	43.0719	2.04787
23	3.2	6.18	1	6.17396	0	43.3368	2.05172
24	3.2	6.18	1	9.45307	0	52.7052	2.21567
25	3.2	6.18	1	8.71306	0	50.8722	2.17867
26	3.2	6.18	1	4.6459	0	37.5745	1.97532
27	3.2	6.18	1	7.06728	0	46.238	2.09638

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