Before starting my presentation, I want to thank our thesis advisor, Dr. A. S. Nazmul Huda Sir, who helped us from the beginning to end and Mohaiminul Sir, who provided us with many information regarding the publication process.

So, I am Tanjil Ahmed with our paper, **Monte Carlo Simulation for Reliability Worth Assessment of Distribution System Considering Momentary Interruptions.**  I will go into the details of MC & momentary interruption in a bit, before going into the details, we need to know why do we need this MC method? Reliability Worth study tells us about the interrupted energy and momentary loss that are faced by the utilities which involves lot of uncertainty. For this MC method is used.

So, what is MC Method? MC method is a computational algorithm or mathematical technique that is used to estimate the possible outcome of an uncertain event. When I am talking about the estimation, there will be always doubt on the matter that, how accurate MC Method will be? Well almost accurate, the error is less than 5%. I will discuss MC method more in details at the test result part.

Moreover, we have shown both analytical method and MC method in this paper and MC method is preferable over analytical method because we can take random variables into consideration. We have done this assessment on Roy Billiton test system connected to BUS4 distribution system. BUS4 distribution system has only 7 feeders, 38 load points, 67 sections and only 3 types of customers like, residential, small industrial and commercial, still the effect of momentary interruption on distribution system is huge.

So, what is momentary interruption? There are typically 2 types of interruption that are faced by customers. One is momentary and another is sustained, energy supplied interruption up to 3min is called momentary interruption and more than 3min fall under the sustained interruption category. However, people take different range of momentary interruption for their assessment, in our case it is 0.15 second to 15 seconds.

Now, I want to talk about 2 indices that we discussed in our paper. One is EENS (expected energy not supplied) & another is ECOST (expected cost of interruption). We have taken 4 things into consideration while evaluating the indices. Those are Effect of Feeder Design Configuration, Effect of Line Failure Rate, Effect of Transformer Failure Rate & Effect of Customer Type.

**Modeling of EENS & ECOST**

Breaker, recloser (Operation & Restoration)

TTF & TTR (Operation History Tui, TTF=λi) (Restoration History Tdi, TTR=ri) <U, V [0, 1]>

**Conclusion:** In this paper, I have tried my best to explain, why momentary interruption is a concern for distribution system, effect of different faults and how those faults increasing the costs and energy loss. Moreover, how MC method is going to help you to get the idea about faults and indices that I explained above. So, that is all from me, if you have any question then please ask, thank you.

U, V = Random variables between 0 to 1

Q = Number of times component i fails during the simulation process

N = Desired number for simulation period

Bi = Unavailability for the component i

Up = Unavailability for the load point p

ni = momentary outage event

Cavg = Average cost model from SCDF

rp = failure duration

Lp = Average load level per point

np = total number of supply