00000 0.0 0.0 0.0 0.0 0.0 0.0 0.0 -9.8 0.0 30.0 2E-03 1.0006 0.000E+00 0.000E+00 1.0 Dynamic 1.000E+00 ---The following 3 by 3 --relates analysis of rotating NREL 5MW blade under gravity force BEAMDYN V1.00.00 Driver INPUT FILE global frame TipLoad(4)
TipLoad(5) TipLoad(2) RootVel(6) RootVel(4) Z S A S GX TipLoad(6) TipLoad(3) DistrLoad(1) GlbPos(2) t\_initial TipLoad(1)DistrLoad(6) DistrLoad(5 DistrLoad(4) DistrLoad(3) DistrLoad(2) RootVel(5) GlbPos(3) GlbPos(1) final 0.000E+00 1.000E+00 0.000E+00 SIMULATION CONTROL -----APPLIED FORCE ROOT VELOCITY PARAMETER --FRAME PARAMETER ----GRAVITY PARAMETER ----PRIMARY INPUT matrix is the initial direction cosine matrix, GlbDCM(3,3), to initial blade reference frame - Component of distributed 0.000E+00 0.000E+00 - Component of position vector of the - Component of position vector of the - Component of gravity vector along Y direction  $(m/s^2)$  - Component of gravity vector along Z direction  $(m/s^2)$ - Starting time of simulation - Component 1.000E+00 - Component of angular velocity vector of the beam root about  ${\tt Z}$ - Component of angular velocity vector of the beam root about  ${\tt Y}$ Component of concentrated force vector at blade tip along X direction Component Component of distributed moment vector along Y direction (N-m/m) Component Component of distributed force vector along Z direction (N/m) Component Component of position vector of Component of gravity vector Time increment size Ending time of simulation Component Component Component Component Component of angular velocity vector of the beam root about X axis of concentrated moment vector at blade tip along Z direction of concentrated force vector at blade tip along Z direction FILE ---of concentrated moment vector at blade tip along of concentrated moment vector at blade tip along X direction of concentrated force vector at blade tip along Y direction of distributed moment vector along Z direction (N-m/m) of distributed of distributed moment vector along X direction (N-m/m) force vector along X direction (N/m) force vector along along X direction (s) (s) the initial blade reference initial blade reference initial blade reference К direction  $(m/s^2)$  $(m/s^2)$ (N/m) Y direction frame along frame along frame axıs axis along (rad/s) (rad/s) (rad/s)  $(\mathbb{Z})$ (N) (N-m) (N-m) X direction Y direction direction

(E) (E) (E)

"BeamDyn\_Input\_5MW.inp"

Name of the

primary input file