```
class KEGradOnEdge {
 public:
   bool Enabled;

   /// constructor
   KEGradOnEdge(const HorzMesh *Mesh)
    : CellsOnEdge(Mesh->CellsOnEdge), DcEdge(Mesh->DcEdge) {}

   /// The functor takes edge index, vertical chunk index, and kinetic energy
   /// array as inputs, outputs the tendency array
   KOKKOS_FUNCTION void operator()(const Array2DReal &Tend, I4 IEdge, I4 KChunk,
                                   const Array2DReal &KECell) const {
      const I4 KStart      = KChunk * VecLength;
      const I4 JCell0      = CellsOnEdge(IEdge, 0);
      const I4 JCell1      = CellsOnEdge(IEdge, 1);
      const Real InvDcEdge = 1._Real / DcEdge(IEdge);

      for (int KVec = 0; KVec < VecLength; ++KVec) {
         const I4 K = KStart + KVec;
         Tend(IEdge, K) -= (KECell(JCell1, K) - KECell(JCell0, K)) * InvDcEdge;
      }
   }

 private:
   Array2DI4 CellsOnEdge;
   Array1DReal DcEdge;
};
```